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CANNON RESERVOIR HUMAN ECOLOGY PROJECT

Michael J. O'Brien, Editor

Volume 2

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AN ANALYSIS OF HISTORICAL CERAMICS
FROM THE CENTRAL SALT RIVER VALLEY
OF NORTHEAST MISSOURI

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by

Teresita Majewski and Michael J. O'Brien

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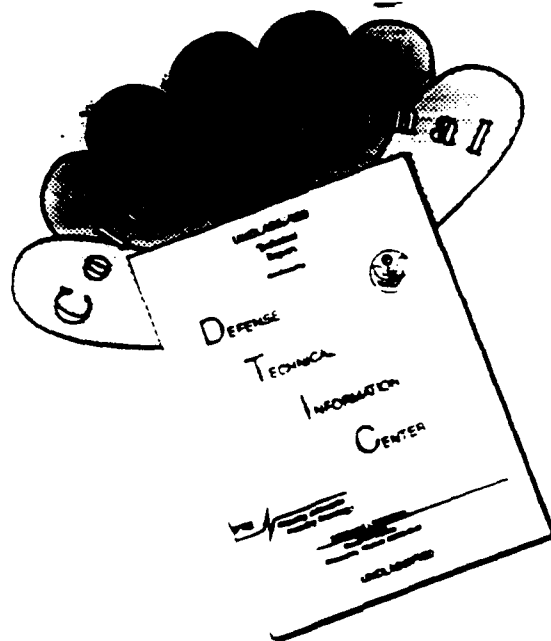
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by

Teresita Majewski and Michael J. O'Brien

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Department of Anthropology
University of Missouri-Columbia
Number 3
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PREFACE

This is the second in a series of occasional volumes on work undertaken as part of the Cannon Reservoir Human Ecology Project, a joint University of Nebraska–University of Missouri interdisciplinary program in the Salt River valley of northeast Missouri. The Cannon Project, sponsored by the St. Louis District of the U. S. Army Corps of Engineers, was formed in 1977 to investigate processes of ecological adaptation and change in the central portion of the Salt Valley. Specifically, the project focused on isolating significant cultural patterns and processes as reflected in material remains and historical documents.

This volume is an outgrowth of several years' work in analyzing the historical-period settlement of the central Salt River valley. Archaeological fieldwork and documentary research were directed toward testing numerous implications of a model of frontier settlement derived from previous work in the Midwest. Although much of this work has been, or soon will be, published, there has until now been little published on the historical-period artifacts. This deficiency is due in part to the abundance of reliable archival material, upon which we have been able to rely in testing the implications of the settlement model. For the most part, the artifacts have been used to fill in gaps in our knowledge of the historical period.

As we hope to demonstrate, however, there is considerable information to be derived from the analysis of certain classes of historical artifacts, even in cases where archival materials are abundant and relatively complete. In 1982 Terry Majewski began the analysis of nineteenth- and early twentieth-century ceramics from five sites excavated by the Cannon Project. One goal of the analysis was to organize the ceramics into classes and to compare the percentages of like classes on an intersite basis. Some previous studies of historical ceramics have attempted to link ceramic types or classes to wealth and status, especially in instances where the absolute or relative values of certain ceramic types or classes are known. Land entry data, agricultural census data, and architectural analysis of residential structures allowed us to rank-order by wealth many colonists of the Salt River valley frontier, giving us a good baseline against which to compare the ceramic assemblages.

A second, perhaps more significant, goal of the project was to produce a detailed description of the materials, framing it in a classification system that would be applicable across the Midwest. One problem encountered by researchers working on midwestern historical sites is the lack of published illustrations of

ceramics. Another problem is the inconsistency in analytical systems. Perhaps because of standard archaeological training, many archaeologists rely heavily on the concept of ware in their classifications of historical ceramics. This approach has some merit when dealing with eighteenth-century materials, but sales catalogs, advertisements, and shipping documents from the nineteenth century indicate that potters no longer were marketing ceramics exclusively by ware. Decoration had become the more important variable in distinguishing among ceramic groups. For this reason we decided to classify the ceramics by a hierarchical paradigm based on decoration-related decisions made by potters.

Throughout the volume we have tried to maintain an even balance between presenting too much information and not enough information. We finally decided that many readers of the report probably are at the point we were three years ago: They know something about historical ceramics but are not at the point of being thoroughly versed in the subject. We also have discovered that although there is a wealth of published information on historical ceramics, the majority of reference works treat only the elaborate, "high style" pieces and bypass the "everyday" pieces that were available and affordable to the person of average means. We have tried to sort through the literature—archaeological as well as collector-oriented—to produce what might be termed a primer on ceramics found in the Midwest.

The range of materials discussed here certainly is not inclusive of everything that might be found on a nineteenth-century midwestern site, but it is extensive. Based on our perusal of assemblages from other excavated sites in Missouri and neighboring states, as well as of collections of complete vessels, we have found considerable similarities in composition. Thus we believe the report is applicable to a large section of the Midwest. To illustrate the range in materials we use color plates in addition to black-and-white line drawings. This should add to the usefulness of the report.

Several people deserve acknowledgment for the contributions they made during the various phases of the project. Since its inception, Dale R. Henning, formerly of the University of Nebraska–Lincoln, and now of Luther College, Decorah, Iowa, has served as principal investigator of the Cannon Project. He has allowed us unlimited latitude in developing new research interests and has provided a steady hand throughout the project. Terry Norris, our liaison with the St. Louis District, U.S. Army Corps of Engineers, and Owen Dutt, chief of the Environmental Section of that office, have offered

us every courtesy and consideration during the last seven years. Any success the project has achieved must be shared equally with them.

The excavations and laboratory processing and analysis were directed by Jacqueline E. Saunders. Her dedication to the project and her uncompromising zeal for preserving the resource base ensured that we had well-documented excavation plans and catalog systems with which to work. Archival research was directed by Roger D. Mason. His skillful treatment of data generated by this research forms the basis of much of what we know about the Salt River valley colonists.

We thank Jay Yates for illustrating several ceramic pieces, and Susan J. Vale and Thomas D. Holland for producing maps that appear in the report. The architectural renderings of house facades and floor plans that appear were done by the Historic American Buildings Survey, directed by Clayton B. Fraser. Help in sorting sherds into vessels was provided by Michael K. Trimble. Jeffrey Yelton identified several backmarks and James C. Price, Cynthia R. Price, and Robert T. Bray clarified

several problems that arose during analysis. The advice of Don Wren and Rosemary Wyatt of University Printing Services (Missouri) has added considerably to the look of the report. Jacqueline Ferguson spent many hours proofreading and helping to prepare the manuscript for publication.

We also greatly appreciate the patience endured by our spouses—Michael K. Trimble and Nancy P. O'Brien—throughout the project. Finally, I personally thank my co-author—Terry Majewski—for the patience and diligence she showed during the long hours of analysis. The work reported here is at least 80% hers. Although Terry became affiliated with the Cannon Project well after the close of fieldwork, she brought with her the same enthusiasm and dedication that I saw in everyone connected with the project. To her—as well as to the other project members—I simply say “thanks.”

Michael J. O'Brien
Columbia, Missouri

INTRODUCTION

Historical-period ceramics have long been used by archaeologists in the United States for a variety of purposes, from dating sites to understanding the role played by a site's occupants in a wider socioeconomic network. Most analyses of historical ceramics from American sites have concentrated on materials that pre-date the nineteenth century. This emphasis has facilitated the study of colonial sites but has contributed little to our knowledge of sites from later time periods. An added bias is that most in-depth studies of ceramics have centered on sites in the eastern United States, almost to the exclusion of those located west of the Appalachian Mountains. In the Midwest, especially in areas west of the Mississippi River, few detailed ceramic studies have even been attempted. Most excavations of historical-period sites in those areas have centered on forts, trading posts, or commercial buildings, which do not yield the wide range of ceramic materials used in the region after 1800.

This is not to say that there are *no* thoughtful treatments of historical ceramics from the greater Midwest. There are, and these are discussed in Chapter 2. The work of Price (1979), Lofstrom (1973, 1976 [also Lofstrom *et al.* 1982]), and Miller (1973, 1974, 1980 [also Miller and Hurry 1983]), among others, has clarified the temporal positioning of certain ceramic types and classes, and has addressed questions concerning the availability of these items to midwestern settlers and whether or not ceramics are reasonable markers of status. For the most part, however, treatments of nineteenth-century ceramics from midwestern sites tend to be descriptions of single assemblages. Few studies have attempted to relate individual assemblages to those from other sites.

As a result, investigations into frontier-period settlement in the Midwest—especially studies focusing on rural Euro-American farmsteads—do not have access to a widely based, well-constructed ceramic sequence as an aid either to order sites chronologically or to address larger, anthropologically oriented concerns. Although the works cited above, and a few others like them, are of considerable help, there are large spatial gaps among the various areas studied. It presently is unclear whether or not patterns defined in a few locales hold across the Midwest, simply because of the lack of complementary analyses.

A related problem concerns the approaches used in the analysis of historical ceramics. One commonly used

approach is to divide an assemblage into ware groups based on paste and glaze characteristics—e.g., creamware, pearlware, and whiteware—and then to create types and varieties within each ware group, based on decorative elements. As we discuss at length in Chapter 2, there are several reasons why this is inappropriate for nineteenth-century ceramics, especially those from the first half of the century. The primary reason is that ware groups, for the most part, are archaeological constructs only and have little in common with how ceramic items were cataloged and marketed. To understand something about the flow of goods through a society and how various classes of items were perceived, one should take into account contemporary documents on the goods—in this case sale bills, bills of lading, etc.

We became acutely aware of the problems involved in dealing with historical ceramics from the Midwest during analysis of material from five northeastern Missouri farmsteads excavated between 1978 and 1980. The archaeological work was conducted as part of the Cannon Reservoir Human Ecology Project, an interdisciplinary approach to understanding the dynamics of man's tenure in the Salt River valley throughout the Holocene.

Research into the historical-period occupation of the study region focused on the years 1818 to 1850, coinciding with the periods of initial colonization, development of the frontier area, and close of the frontier. A significant amount of archival data was generated during the study, including information from genealogies, probate records, agricultural and population censuses, land entry records, General Land Office record, and the like. These data were coupled with architectural information and excavation data to produce a rather fine-grained picture of frontier dynamics in the central Salt Valley (O'Brien 1984).

Because of the wealth of reliable documentary and archival information available for the frontier period, including information on the histories of the excavated farmsteads, we were able to place less emphasis on the material remains as a guide to understanding the dynamics of frontier life. Thus, for the most part we used excavated materials as supplements to the analysis of frontier settlement and not as major sources of data.

This strategy worked well for developing a model of frontier dynamics and testing its implications against new data sets, but we believed from the outset that the material remains—especially the ceramics—were signifi-

cant data sets in their own right, and that there was considerable value in analyzing them in depth. Importantly, while the resulting data have important implications for the study of frontier development in the central Salt River valley, the data should benefit archaeologists working in other areas of the Midwest, especially in regions where the depth of documentary material is not as great as it is for the Salt River valley of northeast Missouri.

This monograph summarizes what currently is known about the nineteenth- and early twentieth-century ceramics from the five excavated farmsteads. We have attempted to describe the material in as great detail as possible and to document the histories of many of the ceramic classes. Where such information is known, we provide extensive documentation on makers' marks and registration marks. The monograph was prepared with archaeologists in mind, whether or not they are knowledgeable about historical ceramics. Color plates were used to illustrate a range of material that should occur frequently on nineteenth-century sites, and a variety of backmarks was photographed to supplement the descriptions in the text.

Aside from allowing us to produce a monograph that, hopefully, will be useful to archaeologists in identifying ceramic materials, the ceramic analysis has produced interesting results. It has given us insights into nineteenth-century households that were unavailable previously. These are discussed in chapters 4 and 5. Unfortunately, the analysis raised many questions that cannot presently be answered. It is clear, however, that when possible the analysis of material remains from historical sites must be linked to documentary data, and both must be linked to a comprehensive, problem-oriented research program. This should not be news to anyone, but it is evident in the literature that (a) historical archaeological projects often make short shrift of documentary research and (b) historical ceramic analysis often is relegated to a description of ware categories. These observations are especially true with regard to short-term projects, especially those that fall under the category of "cultural resource management," where (a) time usually is a factor in analysis and (b) there are no personnel familiar with the material.

To form a larger framework for the ceramic analysis discussed here, we present below a brief history of the Cannon Project and discuss the research objectives of, and various methods used by, the project, and present a summary background of Euro-American settlement of the central Salt River valley. More detailed information can be found in Mason (1982, 1984), Mason *et al.* (1982), O'Brien (1984), O'Brien *et al.* (1982), and Warren *et al.* (1981, 1982). Following this discussion we summarize background information on the five excavated farmsteads.

THE CANNON RESERVOIR HUMAN ECOLOGY PROJECT

The Cannon Reservoir Human Ecology Project, sponsored by the St. Louis District of the U. S. Army Corps of Engineers, was formed in 1977 to investigate interactions between human populations and the environment in the central Salt River valley of northeast Missouri. The river valley, which contains several tributaries that coalesce to form the mainstem of the Salt, drains a portion of the southern margins of the Prairie Peninsula—a large midcontinental expanse of mixed grassland and forest—before emptying into the Mississippi River. Because the region is a mosaic of grassland and forest biomes, it is an excellent laboratory in which to test several assumptions concerning frontier settlement, including those that address both the preferred characteristics of land entered by frontier agriculturists and the nature of frontier farmsteads, households, and communities.

The Project Area

The project area, a region of approximately 1149 km² (444 mi²), centers around the Clarence Cannon Dam and Mark Twain Lake, located about 100 river kilometers (60 miles) above the junction of the Salt and Mississippi rivers (Figure 1). There are two important characteristics of the project area. First, the region lies on the southern fringes of the Prairie Peninsula and contains segments of a major ecotone that forms the interface between extensive components of two distinct ecological communities. Just prior to Euro-American settlement, tall-grass prairie dominated approximately a third of the project area (Warren 1982); the remainder was covered by sparse to dense oak-hickory forest (Figure 2). Second, within these two biomes there was significant environmental variation that can be modeled as relatively homogeneous zones with recurrent geographic and topographic associations (Warren and O'Brien 1981).

Effects of the prairie-timber ecotone on patterns of settlement and resource extraction may have been profound in the Cannon region. In general, settlements along ecotones may be expected as a response to varied resource needs of diffuse or mixed economies. While ecotones themselves are not necessarily productive, or are productive only on a seasonal basis, they can function as central staging areas from which critical resources from adjacent communities can be tapped efficiently.

Cultural Background

Euro-American settlement of the project area began in 1818, shortly after the land was surveyed by the

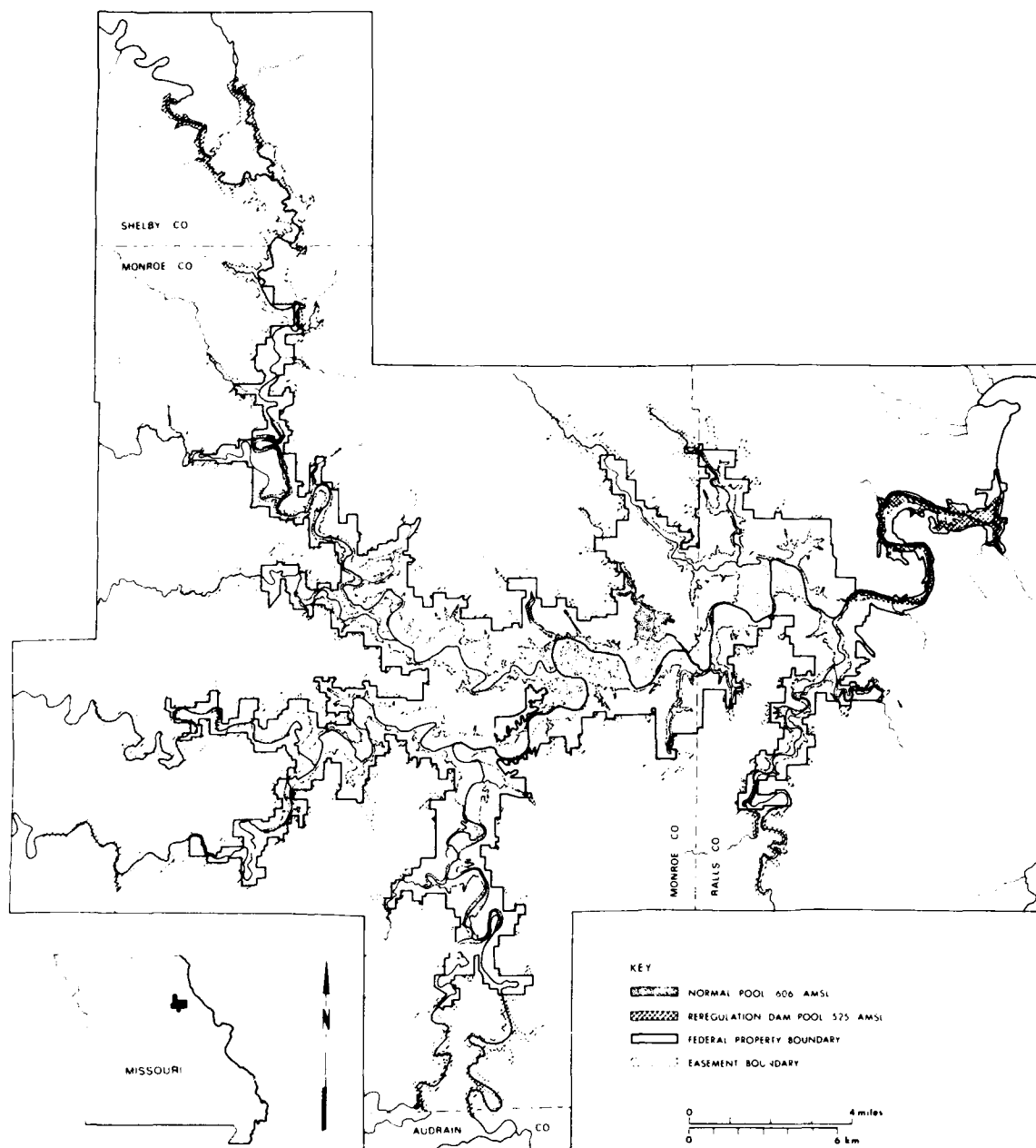


Figure 1. Location of the Cannon Reservoir Human Ecology Project area (from O'Brien and Henning 1982).

General Land Office and placed for sale in the government land office in St. Louis. The majority of immigrants to the central Salt River valley came from the Bluegrass region of Kentucky, a 34-county area centered around Lexington. There they had participated in an evolving social, economic, and agricultural pattern termed *upper South* culture (Mitchell 1972, 1978). In brief, the upper South cultural system can be viewed as encompassing the interactions between two groups of agriculturists: yeoman farmers owning small tracts of land

and a class of small planters possessing 2 to 10 slaves and larger amounts of land (Mitchell 1978).

Upper South family units in the Cannon region brought with them an agricultural complex composed of mixed farming (corn, wheat, hogs, and beef cattle) and hemp and tobacco production. Agricultural census figures for 1850 indicate that 680 of 681 farms in the project area raised corn. As the fattening of animals for slaughter became important, corn production took on increasingly commercialized aspects.

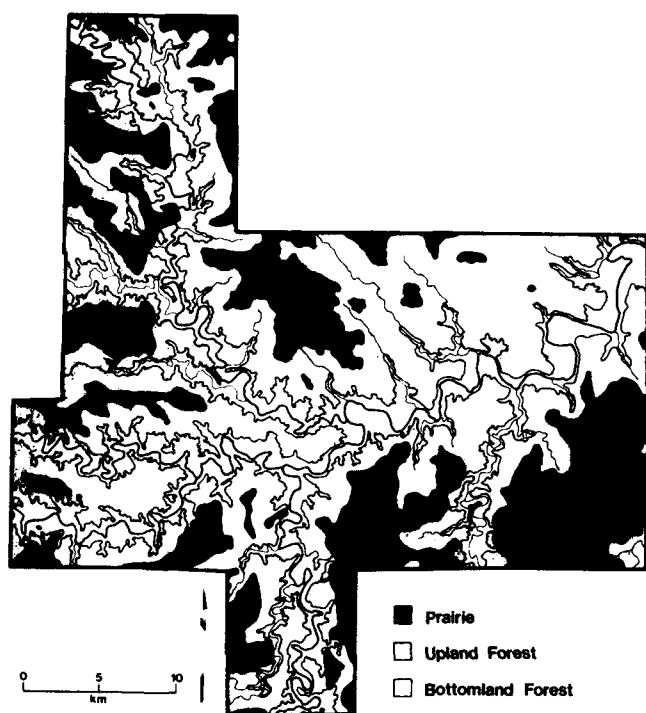


Figure 2. Nineteenth-century vegetation zones in the Cannon Project area (from Warren 1982).

Research Topics

Reconstructing the social history of these upper South colonists of the central Salt River valley was the primary objective of historical-period research by the Cannon Project. Based on our broad interest in understanding the dynamics of frontier settlement in the central Salt River valley and in observing changes in the upper South social-agricultural-economic complex, four research topics were selected for analysis: the settlement system, the community, the household, and the farmstead.

The Settlement System

Analysis of the *settlement system* included (a) reconstructing the regional frontier-period (1818-1850) settlement pattern, (b) isolating the factors that contributed to the pattern, and (c) outlining the dynamics involved in the settlement process. To organize these efforts and to provide a theoretical basis for the study, a model of historical development of the region was formulated. The model served both as a guide to research and as a source of testable implications. It employs several important ecological concepts and focuses on changing locational behavior from the perspective of settlement geography. The structure of the model is adapted from Hudson's (1969) theory of rural settlement location that explains changes in settlement distribution through time.

The theory recognizes three processes of rural settlement—colonization, spread, and competition. Although these processes overlap in time, their modal impacts generally take effect in a sequential manner and can therefore be thought of as phases or stages of frontier occupation.

During colonization, populations extend themselves into new areas, which may be new environments, unexploited portions of old environments, or new territories. Hudson (1969:370) suggests that the morphology of colonial settlement is regular in space, i.e., settlement locations are dispersed. This part of the theory, however, ignores the potential benefits of settling near other settlements, whether existing or planned. Proximal settlement can facilitate neighborly sharing of labor and help maintain existing social ties between related nuclear families or between economically interdependent groups colonizing parts of a region contemporaneously (Warren and O'Brien 1982:98).

Analysis of colonial settlement patterns in the Cannon region demonstrated that there was an overlapping two-tier pattern. The upper tier, an aggregated settlement structure, consisted of a series of settlement clusters spaced at fairly regular intervals across the region (O'Brien 1984). All such clusters over which we have documentary control were based on kin-affinity. The lower tier, a dispersed settlement structure, varied from regular spacing of farmsteads along the ecotone to complex mosaics of landholdings (Warren and O'Brien 1982:393). Detailed analysis of several such mosaics showed that among early colonists the preferred niche was low- to medium-density bottomland forests and ecotonal upland rims, both of which could be cleared rapidly for agriculture.

During the spread phase of settlement, population levels and numbers of settlements increase and fill up the realized niche. The realized niche may expand if technological advances occur at the same time, but the phase ends when populations approach carrying capacity and physical and cultural pressures cause a leveling off or a reversal in growth (Warren and O'Brien 1982:98).

Our model of settlement distribution during the spread phase differs from that presented by Hudson. We expect two distinct, but overlapping, patterns. First, we propose that as offspring reach an age that they begin new farmstead units, these new units should be located near the parent farmsteads. This process is termed *proximal budding*. Second, as new immigrants arrive in the frontier region, (a) they could locate near relatives (for reasons discussed earlier), and thus reinforce the modal settlement distribution, or (b) they could locate in previously unsettled areas, contributing to a more regular settlement distribution.

Analysis showed that new settlement units did bud off from older units and that they tended to disperse

only short distances. Also, continued immigration during the late 1820s and the 1830s did result in both the accentuation of settlement clustering and a more regular distribution of settlement units.

After about 1836, or during the spread and competition phases of the model, the realized niche expanded continuously and incorporated level upland prairies that previously were uninhabited. By 1840, 48% of landholdings had direct access to prairies, compared to only 36% in 1830 (O'Brien 1984). Intensification of livestock production, especially during the 1840s, opened prairies to grazing, so that by 1850, 90% of all livestock producers owned grassland. Tobacco became an important part of the economy during these stages, and high, level bottomland terraces fell under more intensive cultivation (Mason 1984; O'Brien 1984). Finally, with adoption of the steel plow and the introduction of drainage tiles, the extensive and rich flat upland prairies became important aspects of the realized niche.

Concomitant with expansion of the realized niche was the founding and subsequent development of numerous towns in the region, especially Paris and Florida (Figure 3). This resulted in further expansion of the realized niche and contributed to the rapid rise in population density in the western portion of the project area. The magnet-like attraction of commercial and administrative centers is illustrated by the rapid entry of land around Paris just before and after its founding in 1831 (O'Brien 1984).

In summary, analysis of the settlement system of upper South colonists of the central Salt River valley demonstrated that a host of factors contributed to the processes evident spatially in the settlement patterns. Once these processes were identified, we were able to move to the second research topic, the frontier community.

The Community

The *community* level of analysis focused on several aspects of the formation and organization of early nineteenth-century communities in the project area. An important part of this investigation is identifying these early communities and isolating the spatial configurations of socially linked farmsteads. Early colonial-period communities are of particular interest because (a) they represent the settlement of a relatively unknown area and can be examined in a "pristine state," (b) there are excellent documents that can be used to reconstruct family relationships, and (c) little is known of early nineteenth-century Euro-American communities in the Midwest.

Analysis has shown that numerous settlement clusters, or communities, existed along the Salt River and its tributaries by 1836. The communities over which we

have good documentary control were formed, in most cases, by immigrating multifamily units that arrived in the frontier area simultaneously or within a few years of each other. It was not uncommon for one or two families to establish themselves in the new region and then send word back to friends and relatives, who then would arrive within a short time. Proximal settlement by the newer units to established units facilitated sharing of labor and exchange of information among the interrelated family groups.

Although our knowledge of the myriad relationships that existed among families within these clusters ranges in degree of completeness from one community to another, we have good control over five communities. Unfortunately, these data were generated since fieldwork was completed. By 1979 only one community, the Smith settlement, had been studied in detail, and as we discuss below, this community was selected for archaeological investigation.

The Household

The third level of analysis was the *household*, defined as a group of related people living in the same residence who cooperate in performing a wide range of domestic activities (Winter 1974). An underlying assumption in the analysis of rural frontier households is that there were differences in wealth among households—differences that are reflected in documentary sources, residence size, and amount of land owned, as well as in material goods that ended up as part of the archaeological record.

A goal of the project was to select a community and analyze the households within it in terms of the criteria listed above. Questions that seemed particularly important included several that, at least potentially, could be answered through archaeological excavation:

- (1) Can the remains of specific household activities be found *in situ*?
- (2) Can the locations and composition of these activity remnants be used to infer specifics about the behavior of household members?
- (3) Are there differences in material goods from house to house within a community that are adequate measures of prosperity?
- (4) Do these differences mirror data obtained from documentary sources such as tax and probate records?
- (5) How did the rise of commercial centers during the 1830s affect the economy of the area and the local production of nonagricultural goods such as stoneware?

The households selected for detailed examination were located in the Smith settlement; they are discussed in detail in a subsequent section.

The Farmstead

The fourth level of analysis encompassed that of the household and added two more dimensions: analysis of the components of the rural *farmstead* and their spatial organization. Frontier farmsteads were, for the most part, self-contained units that functioned relative to current modes of production. As markets were established closer to colonial settlements, and as agriculturists became involved in commercial production, farmsteads reflected this development. The numbers of structures increased as farmers broadened their interests in raising crops and livestock. The kinds of structures present on a farmstead also changed to keep pace with shifts in emphasis.

Our ability to document changes in the organization of nineteenth-century farmsteads was hampered by the deteriorated condition of much of the standing architecture. Also, as we mention below, most farmsteads underwent significant alterations of their earlier forms. Hence, we were not always able to reconstruct the original farm layouts or to pinpoint when alterations were made.

The Data Base

The ability to carry out a research program that focuses on frontier settlement dynamics rests squarely on the methods and techniques used to generate data relative to frontier settlement systems. It also rests on the quality of the resource base, i.e. the degree of completeness of the archival and archaeological records. This section summarizes the methods used to gather information relative to frontier settlement of the Cannon region, discusses the sites selected for excavation and why they were chosen, and presents the biases that exist in the sample.

Data on the frontier settlement of the central Salt River valley were generated by three methods: assessment of the primary documentary sources related to frontier occupants of the project area; infield survey for, and assessment of, historical sites and extant structures; and archaeological excavation of selected sites. Because of reservoir construction activities, these steps could not always be completed in that order. Fieldwork, which ideally would have been initiated after completion of archival research, often was performed concurrently with the latter.

Between 1975 and 1977 the reservoir flood pool was surveyed, and all structures judged to have been constructed prior to 1920 were recorded. Subsequent survey in the surrounding uplands (sponsored by the University of Nebraska) located additional sites, and while these were recorded, they did not fall under the jurisdiction of the Corps of Engineers. Thus no funds could be expended to excavate them.

By December 1977, 337 structures and sites of razed structures were recorded and their significance assessed for eligibility for inclusion on the National Register of Historic Places. Thirty-four site forms subsequently were submitted to the National Advisory Council on Historic Preservation for determinations of eligibility. Seven of the 34 sites were excavated between 1978 and 1980.

Documentary research began in 1975, with a partial compilation of land-entry data and a preliminary assessment of the backgrounds of project-area immigrants. Detailed reconstruction of settlement patterns and kinship networks began in 1978 and was completed in 1983. The final results of these analyses are found in Mason (1984) and O'Brien (1984). Farmstead histories of the sites selected for inclusion on the National Register of Historic Places were completed between 1978 and 1980.

The locality chosen for detailed examination, including archaeological investigation, was the Smith settlement, located in the west-central portion of the project area (Figure 3). The settlement, identified by name in early historical documents, was founded in 1819, when Joseph H. Smith, Sr., and his family immigrated to the lower Middle Fork locality from Bath County, Kentucky. Other families, many of which were friends or relatives of the Smiths, settled in this area during the next decade.

Social and kinship interactions among the Smiths and other families clearly influenced the resulting aggregations of farmsteads (Figure 4). Two distinct processes were involved in the subsequent spread of settlement from the early nodal points: (a) budding and proximal settlement of new family units and (b) mass colonial immigration of interacting social units that maintained social linkages established prior to migration (O'Brien 1984; O'Brien *et al.* 1982; Warren *et al.* 1981).

There were several reasons for choosing the Smith settlement for detailed analysis. First, we had excellent genealogical and documentary information on the Smiths and related families. Second, we could pinpoint the locations of several farmsteads that were built by those families. Third, those farmsteads were located within the geographic boundaries of our excavation permit from the Corps of Engineers.

These reasons notwithstanding, there are several disadvantages to having placed such a heavy emphasis on analysis of the Smith settlement. One disadvantage is that we do not have a regional sample of excavated farmsteads. The decision to limit major excavation to five sites in the Smith settlement—and thus to bypass a regional sample—was made after serious deliberation. Given time and budget limitations, we believed that understanding the archaeology of a single community in greater detail—especially one over which there existed good control of both chronology and archival data—was better than knowing a little about several unrelated sites.

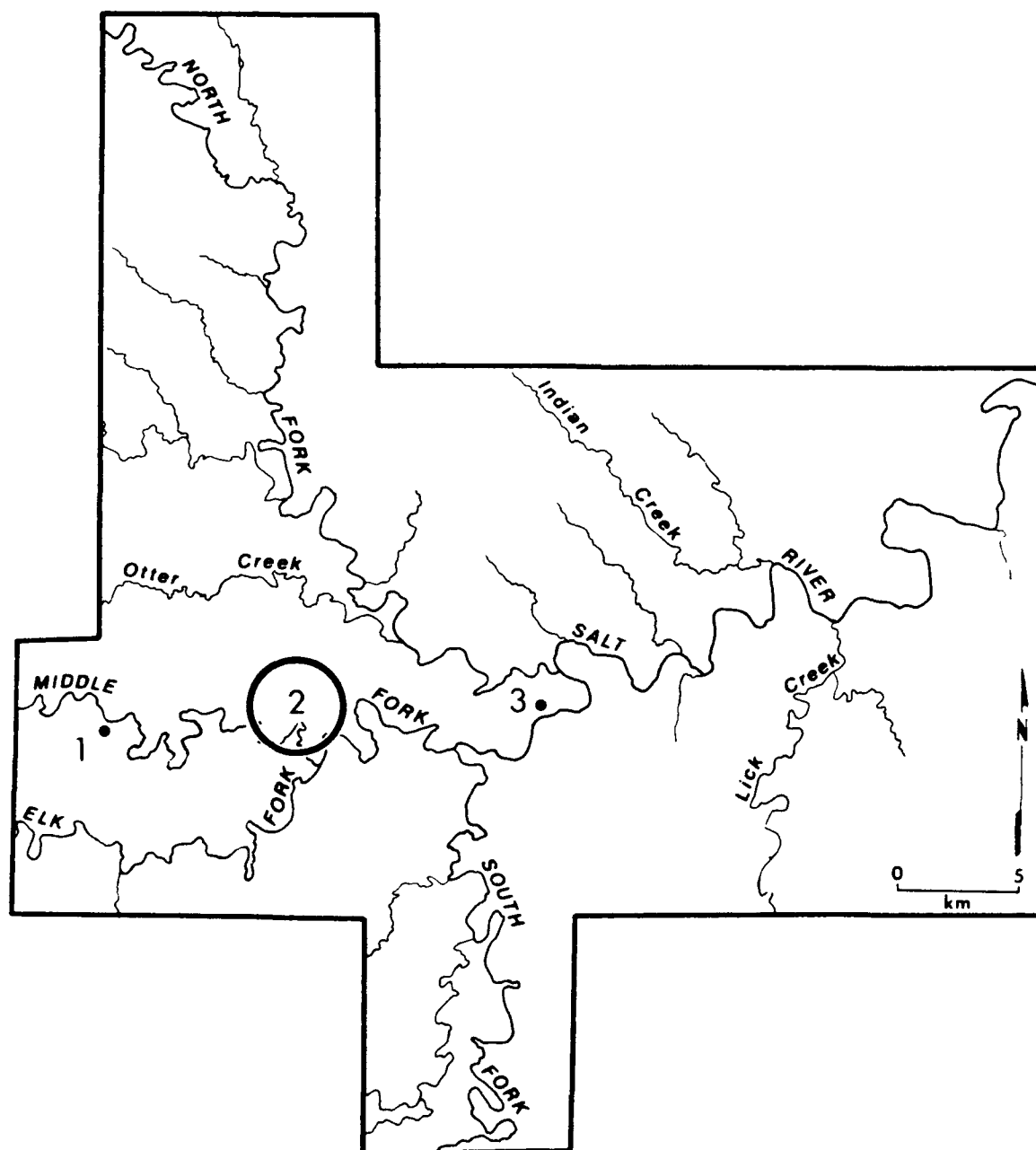


Figure 3. Locations of (1) Paris, (2) the Smith settlement, and (3) Florida.

To compensate for this bias, we test-excavated two sites outside the Smith settlement. Unfortunately, the kinds of archival data that exist for sites in the Smith settlement were not available for the other two. Also, the degree of post-occupation disturbance of these two sites was so great that analysis of the material was not attempted.

The last comment introduces a second bias that has affected our analysis, including that of ceramics: problems of deposition and disturbance. None of the seven

excavated farmsteads contained stratified deposits; rather, deposits were shallow—usually 15 to 20 cm thick—and in some instances showed evidence of extensive disturbance. The exception was a sealed deposit at the Matthew Mappin house that could be dated reliably as pre-ca. 1840. The extensive mixing of cultural deposits can be attributed in part to the way in which early farmstead structures—especially residential structures—were constructed. Log houses, and frame additions to them, often were erected on limestone-slab piers, which

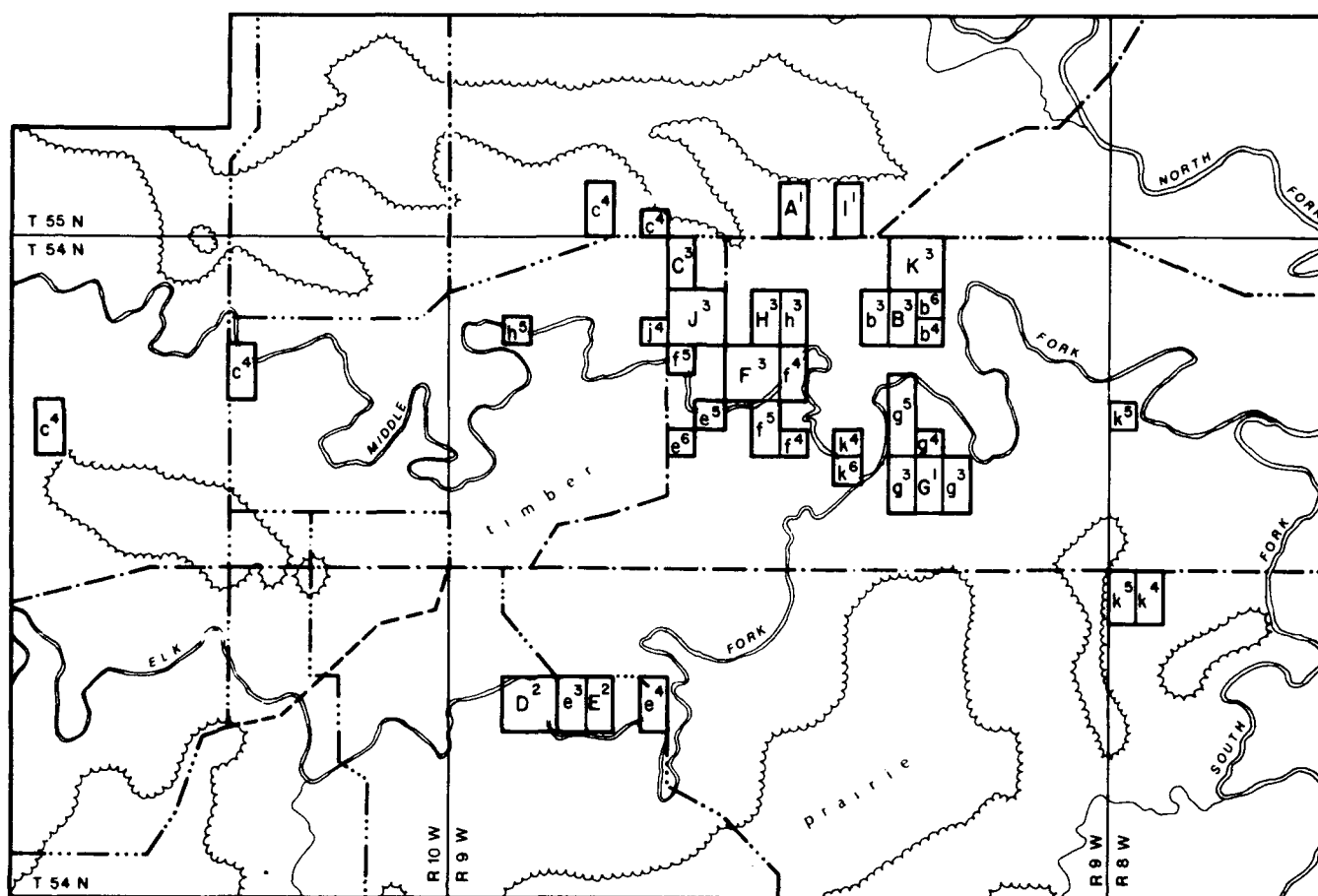


Figure 4. Locations of land entries made by members of the Smith, Mappin, and related families. Letters refer to individual entrants—capital letters denote first entries and lower-case letters denote subsequent entries (A, James Adams; B, Otho Adams; C, James C. Fox; D, Mary Johnson; E, James Mappin; F, Matthew Mappin; G, Alexander W. Smith; H, John B. Smith; I, Joseph H. Smith, Sr.; J, Joseph H. Smith, Jr.; and K, Samuel H. Smith). Numbers refer to period of purchase (1, 1818–20; 2, 1821–25; 3, 1826–29; 4, 1830–34; 5, 1835–36; and 6, 1837–58). James C. Fox, James Adams, and Otho Adams were sons-in-law of Joseph H. Smith, Sr. (from O'Brien 1984).

created open areas under the structures. Through time, material was discarded beneath the houses directly or was removed from the surrounding yard at a later date and placed under the structures. Thus, deposits were, for the most part, amalgams of materials discarded over a period of a hundred or more years.

A third bias was the excavation strategy used. The Corps of Engineers was quite specific as to what portions of sites could be excavated: Excavation was limited to areas within or immediately adjacent to the residential structures. This contract stipulation precluded, in most cases, the sampling of areas of the farmsteads away from house structures. In a few instances, permission was obtained to sample peripheral areas, but, for the most part, residences were outlined, and the intervening areas were excavated completely. This restriction obviously presents a bias when one tries to assess either (a) the functional implications of refuse disposal patterns away

from structures or (b) how representative each excavated ceramic sample is relative to the entire range of ceramics used and/or discarded by a household.

Farmstead Histories

The histories of three of the five excavated farmsteads in the Smith settlement are well documented; the histories of the other two—who built the farmsteads and the initial construction dates—are not well known. As noted, the main sources of data on the farmsteads and their occupants are population and agricultural censuses, probate inventories, land patents, and recorded deed transactions. These sources, when coupled with genealogical data on the families, yield a fairly detailed account of upper South culture in one portion of the central Salt River valley.

Mappin-Murphy

The Mappin-Murphy site (Figure 5) was excavated to gather information on an upper-middle-class land-owner in the Smith settlement. Matthew Mappin was a Bath County, Kentucky, native who, with his brother, James, immigrated to the Salt River frontier during the mid-1820s. He married the daughter of a local resident in 1826 and made his first land entry in 1828. By 1834 the Mappins had four daughters, and by 1838 they had added two sons. Just before Mappin's death in 1849, at the age of 54, his household consisted of two adults and seven children.

Architectural analysis by the Historic American Buildings Survey demonstrated that the impressive heavy-timber Greek Revival house that stood on the site until 1982 (Figure 6) postdated Mappin's initial land entry by at least 10 years. Assuming Mappin and his family lived on that land prior to building the large structure, it was possible that one might find the foundation of an earlier log house. One logical place to search for the log house

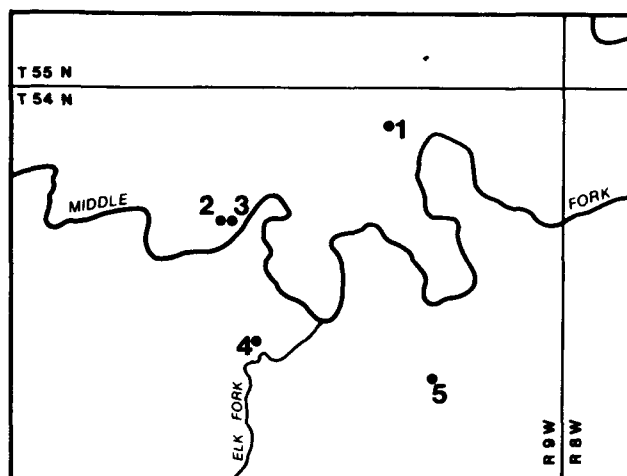


Figure 5. Locations of five farmsteads excavated in the Smith settlement: (1) Samuel H. Smith, (2) Matthew Mappin, (3) Mappin-Vaughn, (4) Smith-Gosney, and (5) Harvel Jordan.



Figure 6. Facade of the 1840-block of the Mappin-Murphy house (from O'Brien 1984).

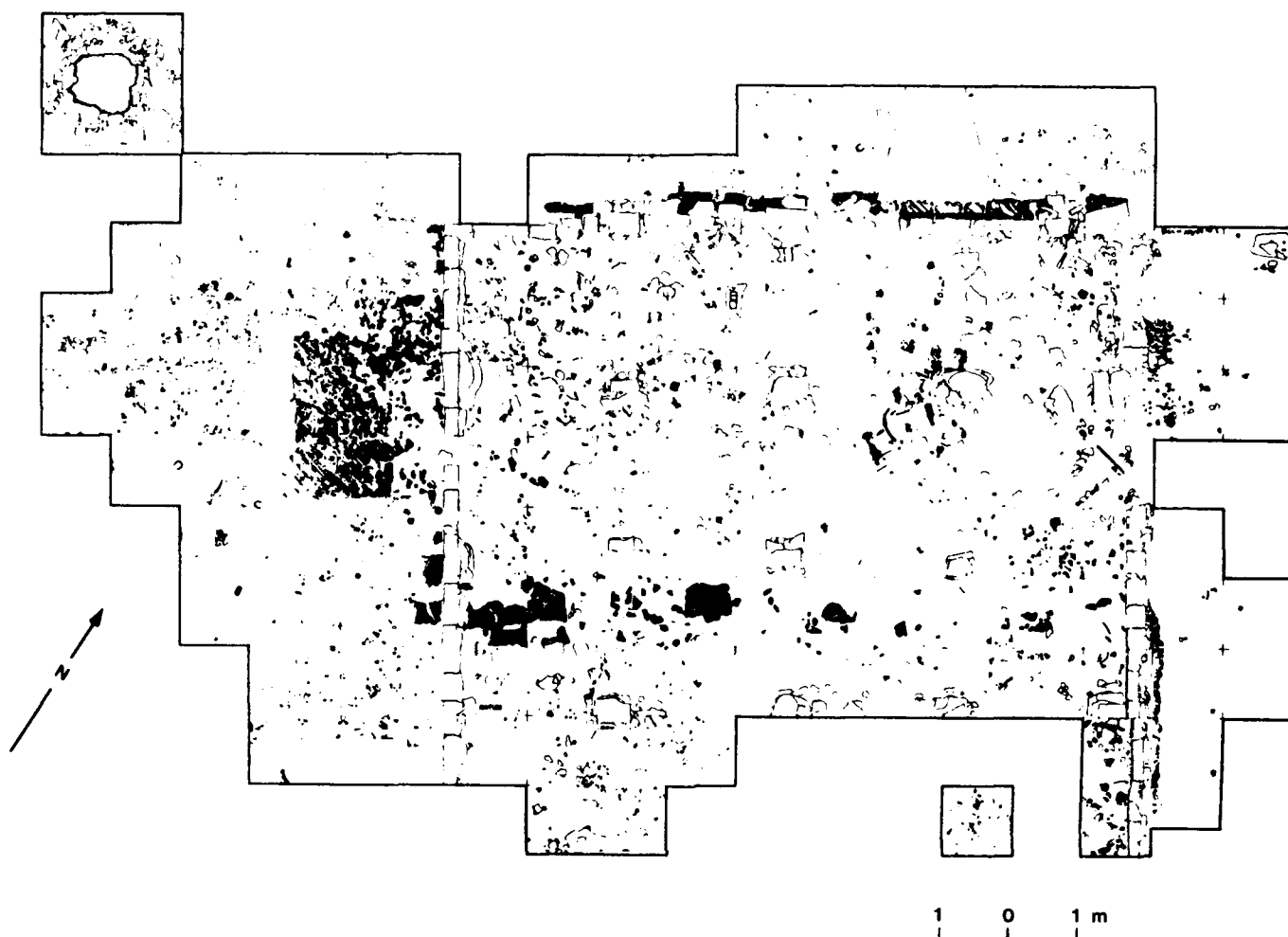


Figure 7. Plan of the Mappin-Murphy house excavation showing construction elements and artifacts left in place. Shaded stones are original cabin foundation (from O'Brien *et al.* 1982).

was under a large Victorian addition placed to the rear of the Greek Revival block in 1893. After removing floorboards and joists from the addition, the base of the chimney and several pier supports of the earlier double-pen log structure were found (Figure 7). The cabin served as a kitchen area to the 1840 block and was tied to it by a common wall.

The original log house, which lasted until 1893 when the structure was razed for the larger addition, was two rooms wide with a fireplace in the west end. The log house sat on piers, most of which were removed and reused for the north perimeter wall of the 1893 addition to the Greek Revival block.

After Mappin's death, the house passed through several owners. In 1867, Mary Thomas Mappin, the sixth and youngest daughter, deeded the house and property to her brother-in-law, John J. Crigler. He sold it in 1891 to John R. Murphy and T. J. Murphy. The

property was held by various members of the Murphy family until 1921, when it was sold to a local family (Scott) who held it until 1973.

Because of periodic remodeling of the structure, portions of the archaeological deposit were disturbed to varying degrees. The only portion believed to be relatively undisturbed is the one under the 1840 block, which should date from the first occupation of the log house until construction of the main block. Material in that area could have been deposited only during an 11-12-year period.

A total of 152 units was excavated in and around the Mappin house, including 14 under the Greek Revival block and 44 outside the west wall of the early log structure. A series of units also was excavated south of the Victorian addition, but ceramics from those units are not included in the analysis. Artifacts were found across the excavated area, but the heaviest concentration oc-

curved along the interior of the west wall of the log structure and in the yard area to the west. The distribution of ceramics (Figure 8) is similar to that seen at several other sites: There is a line of debris just under the perimeter of the log structure, with decreasing frequencies toward the center of the house. The area surrounding the structure, especially to the west and south, contains units with high frequencies of ceramic material.

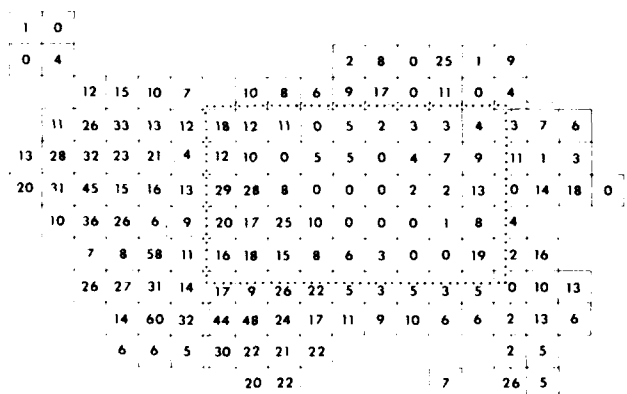


Figure 8. Distribution of ceramics at the Mappin-Murphy site.

Mappin-Vaughn

The Mappin-Vaughn site was tested initially to determine the accuracy of reports that the site contained the remains of a nineteenth-century slave cabin, possibly connected with the farmstead of Matthew Mappin. Subsequent documentary investigation revealed that the land on which the site was located belonged to Fielding Vaughn, who married Mary Thomas Mappin (a daughter of Matthew Mappin) around the time of the Civil War. Unfortunately, little more is known about the Vaughn family. We place the construction date of the house around 1865.

No standing structure was present at the site; only a few fireplace stones were visible on the surface. Excavation exposed the foundation of a three-room structure. The initial two-room block was oriented east-west, with the later single-room addition located centrally on the south wall (Figure 9). Local informants stated that the house was of frame construction resting on log sills and that entry was from the east gable end of the house, a rare occurrence in residential structures in the area. Excavation indicated that the main block was divided centrally into two rooms, supported by stone and rubble piers at each corner and along the central dividing wall. The addition also was supported by piers. An informant stated that the house had been abandoned for several decades prior to its demolition around 1915, when it

was dismantled partially by hand and the remaining elements were pulled down with mules.

Frequencies of ceramics by excavation unit are shown in Figure 10. The densest concentrations were around the southwestern corner of the main block and directly south of the addition. With few exceptions, units under or just inside the sills of the original structure contained higher frequencies of ceramics than units outside the perimeter of the house, indicating that trash was deliberately swept or thrown under the structure. In the addition, squares under or inside the sill perimeter often contained lower sherd frequencies than units outside the perimeter, possibly indicating a change in waste disposal through time. The distribution of sherds from single vessels suggests that objects were not broken in place upon demolition of the house but that they had been discarded previously, with pieces being tossed indiscriminately.

Samuel H. Smith

Samuel H. Smith, with his father, brothers, sisters, and brothers-in-law, immigrated to the Salt River valley from Bath County, Kentucky, in 1819. In 1828 he married the daughter of a neighboring family and entered 160 acres of land along Middle Fork. We assume that an early cabin, which later grew into a massive log house (Figure 11), was erected around this date. Beginning in 1831, the Smith family grew at the rate of one child every 2 years, for 18 years; a fifth daughter was born in 1853. Samuel Smith died in 1872, and his household and farmstead goods were appraised at \$1092.

Using sources of data to rank-order by wealth various families in the Smith settlement (O'Brien 1984), we note that in 1850 the Samuel H. Smith household was among the more prosperous in the locality. However, the prosperity enjoyed by Smith and his affines pales in comparison with that of households in a settlement just to the north of the Smith settlement (O'Brien 1984).

The massive double-pen log house that Smith built—probably just after 1830—was a visible sign of his wealth (Figure 11). The structure abutted an earlier single-pen house that later was razed (except for the log joists and sills) and a frame addition erected in its place (Figure 12). Around 1850, a frame addition on log sills and joists was added to the west end of the two-bay log house.

Upon Smith's death in 1872 his widow sold the land to her children. Her daughter, Mary, and the latter's husband, Robert Scobee, acquired the house and made several additions to it. His son, Henry T. Scobee, purchased the house in 1911 and kept it for 38 years. The house passed through several more owners before it was purchased by the Corps of Engineers in 1974.

A total of 162 units was excavated at the site, including 32 units placed to the northwest of the house.

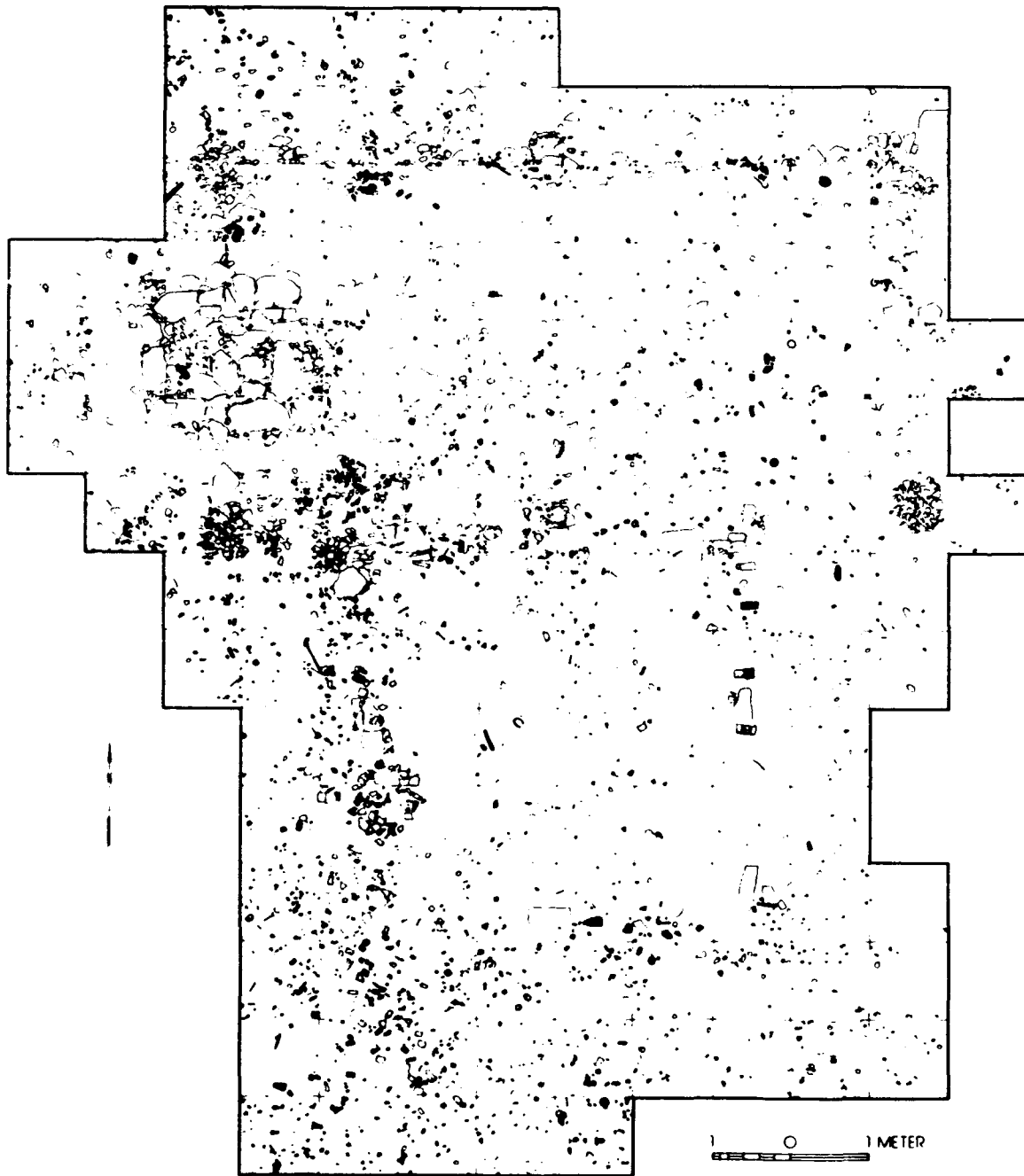


Figure 9. Plan of the Mappin-Vaughn house excavation showing construction elements and artifacts left in place (from O'Brien *et al.* 1982).

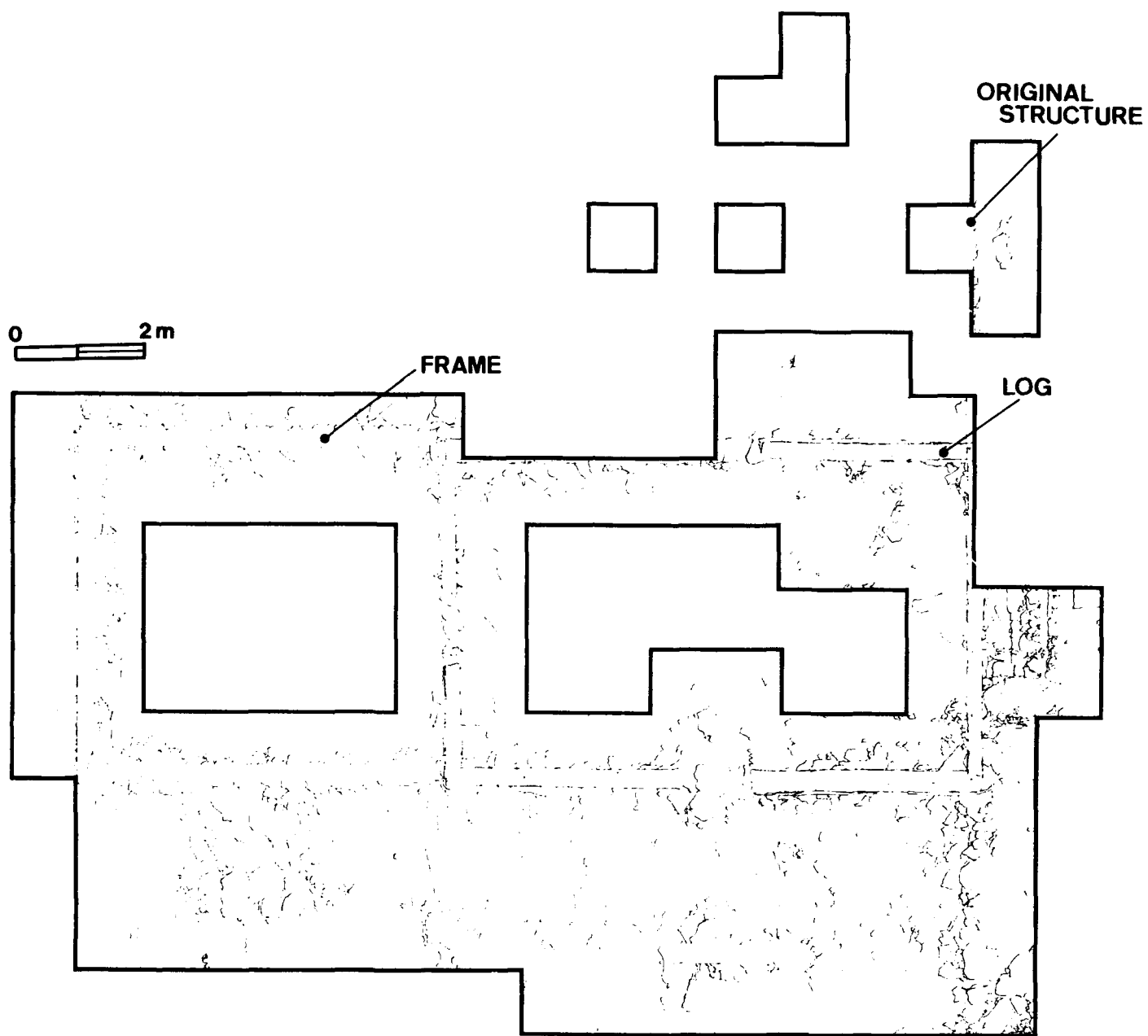


Figure 12. Plan of the Samuel H. Smith house excavation showing construction elements (from O'Brien 1984).

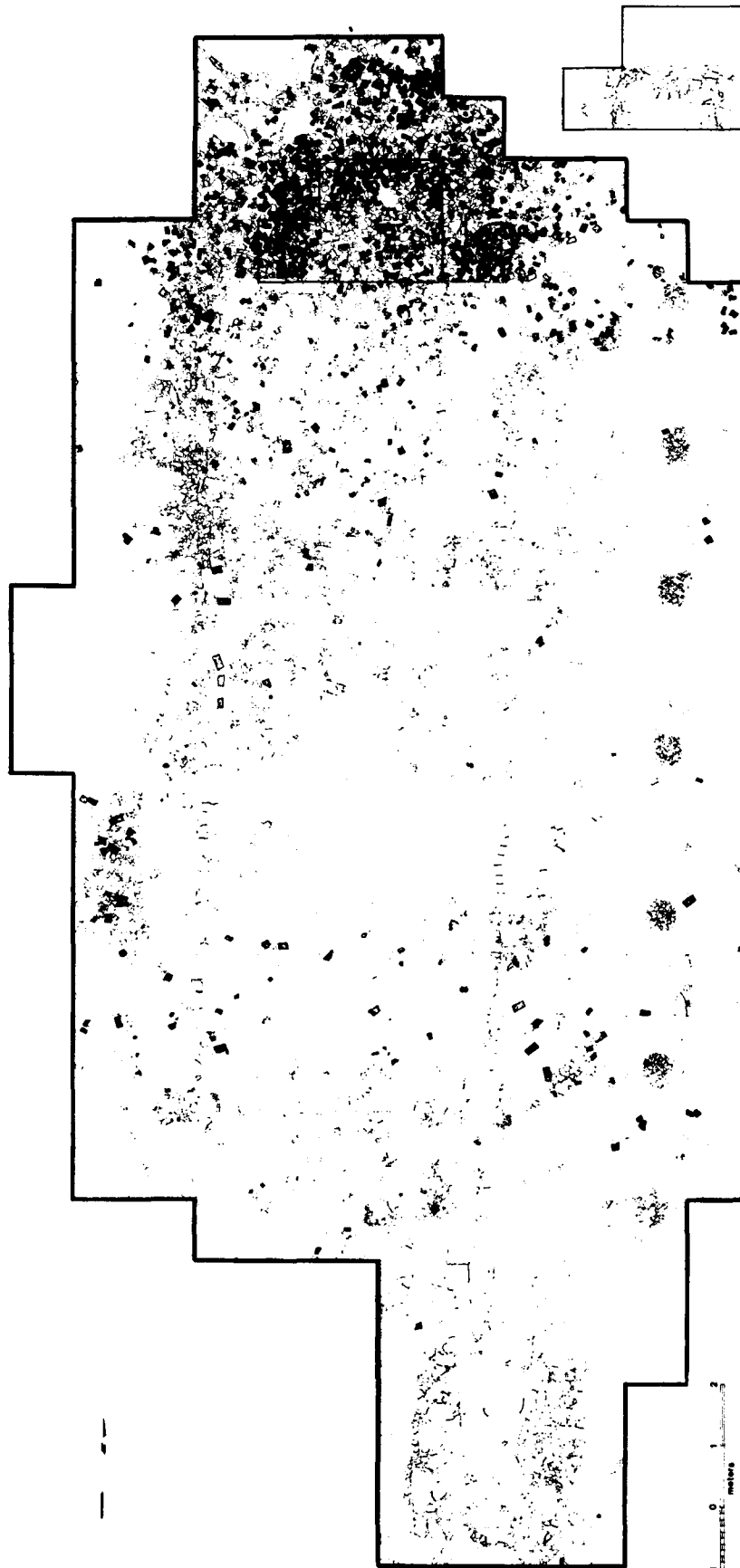


Figure 15. Plan of the Smith-Gosney house excavation showing construction elements.

region shortly after that year, moving south to Audrain County.

The land containing the house was transferred to Morgan Bryan, Sr., of Fayette County, Kentucky, between 1829 and 1838 (no official record of the transaction exists). In 1838 Bryan sold the land to William Gosney, who operated a steam mill on Elk Fork. The enterprise apparently failed and the property was sold by the Monroe County Court in 1863 to settle debts incurred by the operators. One of the three partners in the mill, Pleasant McCann, purchased the property from the court and granted the land to the county the following year for use as a poor farm. In succeeding decades the property passed through numerous ownerships, finally being purchased by the family who sold it to the Corps of Engineers.

We estimate that the house was constructed ca. 1840, a date that indicates William Gosney was the builder. Excavation data suggest that the original structure was a one-room log house with a limestone-slab fireplace in the north gable end (Figure 15). Later, an addition was added to the south end. An informant stated that during the early twentieth century a hall and enclosed stairway to the second story separated the two blocks. The arrangement of limestone slabs used to support floor joists and sills (shown in Figure 15) leads us to suspect that the house was modified from a single-story, one-room log house to a double-pen dog-trot house, with the two pens separated by a nine-foot-wide breezeway. The breezeway later was enclosed to form a hall, a second story was added, two small rooms were added to the south wall of the addition, a porch was built along the east side of the house, and a root cellar was excavated along the south wall of the small rooms. The house was razed in 1917.

The density of artifacts at the Smith-Gosney site was greater than that seen at other sites. With the exception of units around the base of the fireplace and several under the porch and around the root cellar, the density of ceramics was uniformly high across the excavated area (Figure 16). The largest concentration of ceramics occurred in the southwest quarter of the southern block.

SUMMARY

The Cannon Project employed a dual focus—on archival records and on archaeologically derived data—in its investigation of historical-period settlement in the central Salt River valley of northeast Missouri. Critical to the study was the development of a three-stage model of frontier settlement and the testing of certain implications of the model. Four topics were selected for analysis: the settlement system, the community, the farmstead, and the household.

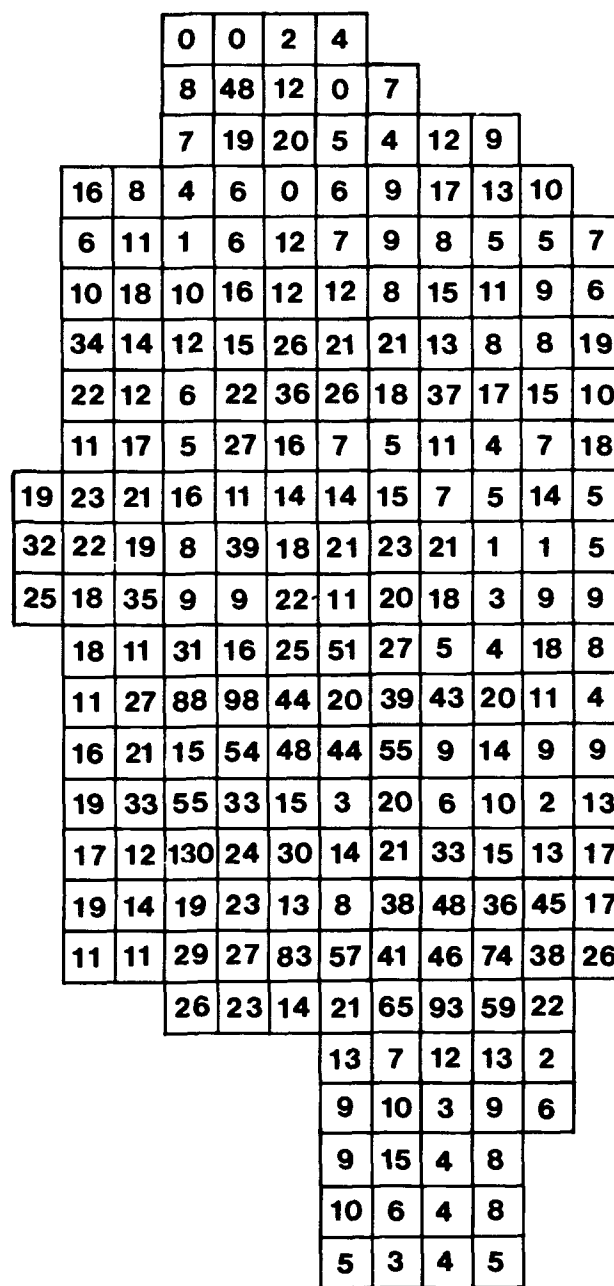


Figure 16. Distribution of ceramics at the Smith-Gosney site.

Archaeological work consisted of site survey, the testing of two sites, and the large-scale excavation of five sites in the Smith settlement—an early community over which we had fairly extensive documentary control. The sites chosen for excavation were those of upper South planters who, for the most part, emigrated from Bath County, Kentucky, between 1819 and 1828. The settlement pattern exhibited by the spatial arrangement of farmsteads in the community reflects the effects of

kin-based networks established prior to, or just after, immigration. The community consisted of small planters who, based on later agricultural-production records, household inventories, and architectural analysis, can be considered members of an upper middle class-lower upper class status rank.

The analysis of ceramic material from the five excavated sites was undertaken (a) to provide a description of the items, (b) to develop a chronological framework for the region, (c) to identify the sources of the ceramics, and (d) to isolate similarities and differences among the assemblages that might reflect differential access or personal preference on the part of site inhabitants relative to certain classes of ceramic items.

Relative to point d, if we accept the premise that ceramic items are, to some degree, indicators of the degree of participation of a household in a wide socioeconomic network, then we should be able to scale households relative to each other by the types and quantities of certain ceramic classes present in archaeologically derived assemblages. In instances where we propose that all assemblages are from equal-status households from a restricted region, we might find few differences in the assemblage compositions, aside from those resulting from either personal preferences or periodic shortages.

As a frontier region matures, we expect to see changes in the availability of certain goods. By 1850 the Salt River valley had ceased to be a frontier region. Town and road development had reached the point that an extensive array of goods and services was available to all project-area residents. Because of the lengthy occupation of most of the excavated sites, we should be able to determine (a) if purchasing patterns changed over time and (b) whether these pattern changes were widespread or localized occurrences. If they were the latter, did they coincide with changes in ownership of the farmsteads?

In summary, the analysis of nineteenth-century ceramics can contribute significantly to the study of frontier settlement systems and their components—especially rural households—if certain biases and problems are recognized and, where possible, corrected. Despite lengthy occupations of most of the house sites excavated in the Smith settlement, and the mixed deposits that resulted from these prolonged occupations, we *have* been able to detect trends in assemblage compositions through time, by using time- and place-sensitive backmarks and identifying ceramic-class dimensions and attributes that changed rapidly over time. The following chapter addresses the problems of ceramic classification and discusses our approach to overcoming the problems.

THE ANALYSIS OF HISTORICAL CERAMICS

Studies of ceramics from historical-period contexts tend to emphasize one or more of the following objectives: (a) describing and classifying the ceramics, (b) positioning the ceramic types and assemblages chronologically, and (c) formulating cultural generalizations based on data derived in part from successfully completing *a* and *b*. Thus, each goal represents an important block upon which to build the succeeding level of analysis. Although some studies have attained these goals, others, for various reasons, have fallen well short of the mark.

One reason behind the shortcomings evident in many studies of historical ceramics is the inordinate amount of time involved in becoming familiar with the myriad details of ceramic history necessary to classify the material and assign it to time periods. Many excellent sources of information exist, though they often are obscure and difficult to locate. In many cases, these sources are narrowly focused and not well indexed. We have learned firsthand that there is no single guide that contains the majority of information needed by an archaeologist to begin analysis of a historical ceramic assemblage from the Midwest.

We believe that such a guide would be valuable for archaeologists working on assemblages similar in content to those from the Cannon region. Much of the material in this chapter was included in an attempt to centralize disparate pieces of information that are useful for analyzing nineteenth-century ceramics, and to suggest references for more extended treatment of various topics.

This chapter is organized around four major themes: (a) describing and classifying nineteenth-century ceramics, (b) placing ceramics into a temporal framework, (c) inferring cultural generalizations, and (d) the classification scheme used in the analysis of ceramics from sites in the Cannon region. Within appropriate sections we also discuss three topics that should interest archaeologists who have not had much experience in dealing with historical ceramics: (a) published sources useful for background information, (b) the concept of *ware* and problems in using the concept, and (c) sources for the identification of various kinds of backmarks.

The following section addresses problems involved in describing and classifying ceramics, especially problems that result from a reliance on the *ware* concept. Such an emphasis ignores important points brought out in the literature concerning how nineteenth-century

potters viewed the ceramic pieces they manufactured and marketed, i.e., the terms used by ceramic manufacturers to describe their products. The section also contains a brief introduction to the ceramic literature and an extended discussion of various criteria suggested by researchers for distinguishing among ware groups. The section concludes with a few examples of how the *ware* concept has been interrelated successfully with analyses of decoration. These studies were integral to the approach adopted for the analysis of ceramics from the Cannon region.

DESCRIPTION AND CLASSIFICATION OF HISTORICAL CERAMICS

Archaeologists generally agree that the ultimate goal of their discipline is to provide explanations for past behavior—explanations that are evaluated in terms of their power to predict patterning within or among data sets. We noted earlier that this goal can be achieved only after the material items used for pattern recognition have been classified and placed in a temporal framework.

There has always existed in archaeology a debate over the “meaning” of units used to classify or group cultural objects, i.e., whether classes or groups can be constructed and interpreted as cognates of what the original makers of the objects had in mind. This debate notwithstanding, any system for classifying artifacts from the historical period, such as ceramics, should, when possible, incorporate analytical dimensions that have what might be termed “historical reality.” In the case of historical ceramics, documentary sources suggest that certain dimensions were historically more real than others, in terms of decisions made by the people who actually produced, marketed, and used the ceramics. A classification system that contains emic elements can, perhaps, in the long run allow us to make cultural generalizations that otherwise would be impossible to infer.

Three immediate problems can face archaeologists when they attempt to describe and classify historical ceramics, especially archaeologists with little or no previous experience: Where was a certain ceramic piece manufactured, which company produced it, and when was it made? Without a working knowledge of ceramic

histories, which may be located only in obscure sources, archaeologists often resort to a scheme of categorization they know best: the type-variety system. The basis for many such systems is the concept of ware, which is based on paste and glaze characteristics. In many instances, these characteristics, or attributes, though important, are not sufficiently distinct to provide consistent sorting guidelines.

Despite the wealth of information that exists on nineteenth-century ceramics, many archaeological treatments of these materials tend to include "pieces" of ceramic histories that somehow are linked to an excavated assemblage. The use of the type-variety system to group historical ceramics reflects the fact that many archaeologists look to the literature on prehistoric pottery classification for their models. The following summary is offered as a first step toward familiarity with the historical-ceramic literature.

Sources for Ceramic Identification

Antique dealers and ceramic historians have produced most of the descriptive literature pertaining to nineteenth-century ceramics, particularly those from Britain. Until late in the nineteenth century, British pottery from the Staffordshire district dominated the refined-earthenware market in the United States and Canada. In the latter half of the nineteenth century, more than a third of Staffordshire export wares were shipped to the United States, with the remainder going to Canada, Australia, and other areas of the British empire (Godden 1972:7). Although suitable clays for earthenware production were available in the northeastern and midwestern United States (Ketchum 1971:3, 41, 97, 119-20; Roberts 1964:470), American potters limited themselves to the production of coarse earthenwares such as yellow ware or stoneware, since it was unprofitable for them to compete with the more refined British imports. It was not until after passage of the McKinley Tariff Act in 1890, which limited British imports, that American potters were able to produce refined earthenwares and porcelains on a more profitable basis.

The most comprehensive and prolific chronicle of nineteenth-century British pottery and porcelain is Geoffrey Godden. Godden's work (1961, 1963, 1964, 1965, 1966, 1968, 1972) includes encyclopedic treatments of earthenware and porcelain types, backmarks, and a masterfully edited and updated version of *Jewitt's Ceramic Art of Great Britain*, originally published in 1878. Jewitt's book, as revised by Godden (1972), offers detailed information on nineteenth-century factories or "works" in the major British pottery districts, concentrating on the years of operation of each factory, the wares produced, intended markets, and company backmarks.

Other works frequently consulted by archaeologists hoping to delimit the manufacturing dates for backmarked wares are Cushion (1980) and Honey (1962), who deal primarily with British marks, and Chaffers (1952), Kovel and Kovel (1953), and Thorne (1947), who deal with Great Britain and other ceramic-producing countries, including the United States. Backmarks are treated in more detail later in the chapter. There literally are dozens of works that discuss individual factories or ceramic types—works that are of only peripheral use to the historical archaeologist.¹

Comparable works on nineteenth- and early twentieth-century American ceramic producers are few in number. General guides to the types of pottery and porcelain of the United States, as well as to their identifying marks, include Barber (1904), Cole (1967), Clark and Hughto (1979), and Ketchum (1971, 1983). These guides were written for antique collectors, though they contain information useful to the archaeologist. Ketchum (1971) offers a valuable region-by-region summary of all types of coarse and refined earthenwares, stoneware, and porcelain produced by American potters, and his *Pottery and Porcelain* (1983) is one of the few descriptive works featuring color illustrations. Ramsey (1947) provides a general historical sketch of pottery developments in America, and Collard (1967) documents the British-dominated Canadian ceramic market.

Although there are scattered histories of specific potteries or regions, such as Ketchum's (1970) *Early Potters and Potteries of New York State*, the first in-depth study of a pottery-producing district specifically designed for use by archaeologists is Gates and Ormerod's (1982) *The East Liverpool (Ohio) Pottery District: Identification of Manufacturers and Marks*.

Descriptive and Classificatory Systems

After becoming familiar with the historical-ceramic literature, the next task facing the archaeologist is to describe and classify the ceramic material in an archaeological assemblage. For several reasons discussed below, the majority of systems currently in use to describe and classify these materials is dominated by the use of the *ware* concept as the basis for initial subdivision of ceramic items. The amount of time spent by archaeologists in discussing differences in historical ceramic wares is probably a function of a belief that wares are both discrete and easily identifiable entities, thus making them ideal units for ceramic analysis. We do not deny the importance of the ware concept for the study of pre-nineteenth-century historical ceramics. However, for the primarily British-made ceramics found in

¹Godden (1972:263-66) provides an introduction to these sources.

nineteenth-century and early twentieth-century contexts in North America, it simply is not the most useful analytical tool.

Emphasis on the ware concept in historical ceramic analysis is evident in classification schemes such as those outlined by Cotter (1968), L. Stone (1970), and Waselkov (1979). Waselkov (1979:5) notes that the taxonomic classification he employs is "... an arrangement of the ceramics from Zumwalt's fort by certain analytic criteria relevant to manufacture, use and distribution. These criteria (paste hardness, paste and glaze composition, vessel form, surface decoration, and vessel shape) determine the respective classificatory levels (class, subclass, series, type, variety)." Such an effort represents considerable work and an obvious knowledge of the material, yet in the final analysis it tends to be unwieldy. Terminology often is a stumbling block for other researchers hoping to fit their samples into these predetermined categories. Critical general and specific terms either remain undefined or are applied inconsistently in different analyses.

Problems in Using Wares as Classificatory Units

The single most disconcerting aspect of historical-period ceramic analysis is the disagreement among researchers on the definitions of such wares as pearlware, whiteware, and ironstone. Some authors (e.g., Gates and Ormerod 1982:7) use "whiteware" as a generic term to encompass any type of pottery or porcelain that is white or nearly white in color, ignoring the need to be explicit when using classificatory terms. Some authors, such as Price (1979) and Lofstrom *et al.* (1982) have tried to provide more reliable means of distinguishing among the white earthenwares.

Throughout the discussion of the decorative taxonomy used in our analysis, we occasionally refer to wares of one kind or another. Also in the assemblage summaries presented in Chapter 4 we include an assessment of ware for each vessel. Thus we find it necessary to provide brief summaries of each ware category used in these contexts. However, we do not claim to have solved the ware problem, and we restrict ourselves to the primary nineteenth-century earthenware and porcelain paste types available to consumers: unrefined earthenwares (e.g., redware and yellow ware), refined earthenwares (e.g., pearlware, whiteware, and ironstone), and softpaste and hardpaste porcelain.

Unrefined Earthenwares

Redware is the earliest type of American-made pottery, manufactured from the red-burning surface clays found throughout the country. It is the softest of the earthen-

wares—2.0-4.0 on the Mohs scale—and is fired at low temperatures (Bray 1972:19-20). Body color ranges from pinkish-buff through red-browns to a true brown, and it usually is covered by a soft and easily scratched lead glaze that often appears "crazed" (i.e., has a network of fine surface cracks) (Ketchum 1971:3; Ramsey 1947:128).

Redware comes in a variety of forms, from utilitarian items for dairy and kitchen use to figurines, flower pots, bricks, and roof tiles. A variety of manganese-based glazes were used to decorate redware vessels in shades of brown and yellow, copper-green, and brownish-black (Ray 1974:184). Redware vessels rarely exhibit formal makers' marks to aid in temporal identification. Although redwares were made in North America as early as 1635, most examples date after 1750, with the majority dating to the nineteenth century (Ketchum 1971:4). Ray (1974:184) notes that potters in rural communities were still making redware for local use as late as the 1920s.

Ketchum (1971:93) combines *brownware* and *yellow ware*, since they usually differ only in degree of clay refinement and baking temperature (the lighter the color of the ware, the higher the firing temperature). American yellow ware was manufactured from a variety of fine clays indigenous to the eastern and midwestern parts of the United States, that fired to a light buff-to-dark-yellow color. The hardness of yellow-ware vessels is between 3.0 and 5.0 (Waselkov *et al.* 1975:37). Yellow ware was produced in England during the 1700s but was not introduced in America until the late 1820s. It was a popular ware, especially after mid-century, and large quantities were still being made well into the 1900s (Ketchum 1983:20). Both the wheel and mold-casting were common methods used to shape yellow-ware vessels, which then usually were covered inside and out with a clear alkaline glaze to accentuate their yellow color. Yellow ware rarely was marked. It was used for both kitchenware and tableware, though occasional decorative forms (e.g., Rockingham glaze figurines or doorstops) were made. Certain forms, such as bowls, mugs, pitchers, and plates, were decorated with bands of colored slip in white, blue, black, or brown. This created an effect very similar to English mocha ware, but the vessels tended to be heavier and not as elaborately decorated as the English examples (Ketchum 1971:93-96, 1983:20; Ramsey 1947:149-51).

Refined Earthenwares

Creamware, later referred to as "Queenware," was developed during the late 1750s (Noël Hume 1970:124). It was manufactured simultaneously with pearlware from the late 1770s on, but was only a minor type by the first decade of the nineteenth century. Creamware should

not be confused with "cc," or cream-colored ware. Creamware is a refined-paste earthenware and is primarily of British origin, while cream-colored ware has a relatively coarse texture, very similar to yellow ware, with a clear alkaline glaze. Cream-colored ware was made by a large number of British and American factories throughout the nineteenth century, as an improvement on yellow ware. The forms and molds used for cream-colored ware are identical to the ones used for yellow-ware domestic vessels, and the wares are distinguished only by the somewhat lighter tint after firing of cream-colored ware (Ketchum 1971:120).

Miller (1980:2-3) notes that cream-colored ware is the only ware type referred to in eighteenth- and nineteenth-century price-fixing agreements among Staffordshire potteries. He equates cream-colored ware with undecorated creamware. While undecorated creamware was made throughout the nineteenth century (Ketchum 1971:121), its importance as a medium for dinnerware production was eclipsed by pearlware early in the nineteenth century. We believe that for the sake of clarity, cream-colored ware should be considered apart from creamware, as a generic term for inexpensive, unrefined domestic earthenwares without decoration.

Pearlware is an improved creamware, with a whiter paste and a small amount of cobalt oxide added to the glaze to mask its natural yellow color (Lofstrom *et al.* 1982:5). Pearlwares and whitewares have very similar pastes, the major difference being the composition of the glaze used on each. Pearlwares usually are characterized in the literature as having a bluish glaze, visible as puddling in crevices of a vessel. Lofstrom *et al.* (1982:6) and Price (1979:13-14) stress that the use of blue-puddling alone is insufficient to separate the two wares. In our identifications of pearlware we follow Price's (1979:14) use of the term: "Pearlware vessels, in addition to the blue color in the puddled glaze, should also exhibit an overall blue or blue-green cast generally visible on the entire vessel surface." Lofstrom *et al.* (1982:6-7) note that "the combination of a naturally yellowish lead glaze and a blue pigment results in a glaze that is blue where thickly puddled, such as around a vessel foot or in other nooks and crannies, but which is uniformly *greenish* where thinly distributed over the undecorated surface. This is best seen on undecorated interior or bottom surfaces." They also present a range of Munsell values—10GY 9/1, 5GY 9/1, 5GY 8/1, and 2.5GY 9/2—with one unusually deep blue example—5BG 8/1. Waselkov *et al.* (1975:38) note that the surface textures of creamwares and pearlwares appear to be very finely pitted when viewed under a strong light.

Blue is almost always the only underglaze color used on transfer-printed pearlware vessels, since certain characteristics of the lead-based glaze cause distortion when other colors are subjected to high firing temperatures

(Hughes and Hughes 1968a:150; Little 1969:14-15). However, other colors occur on handpainted pearlwares, including green (Lofstrom *et al.* 1982:7) and black (Price 1979:14). The development of whiteware and a lead-free glaze, along with the use of a wider range of colors, occurred ca. 1820-30. We suggest, as does Price (1979:15), that classifications of pearlwares should be based on the color of the painted decoration as well as on the overall glaze tint. Basing ones determination on these combined attributes can prevent embarrassing mistakes, such as classifying brown, purple, and red underglaze transfer-printed vessels as pearlwares (e.g., Waselkov *et al.* 1975:64-67), which would be a technological impossibility.

White-paste earthenwares, or *whitewares*, are the most enduring of the wares of the creamware-pearlware-whiteware triad, and they are best seen as a logical development along a continuum of refinements in paste and glaze. Some whiteware vessels from the first half of the nineteenth century exhibit a faint but definite blue color in areas where the glaze has puddled, and can be confused with pearlware. What unambiguously separates the two is the overall greenish tint of the pearlware glaze, which is absent on whiteware. Most whitewares are almost pure white in color (closely approximated by Munsell 10Y 9/1, an extremely pale yellow). The lead-free alkaline glazes found on whitewares show less crazing and are less susceptible to wear and flaking than are lead glazes (Lofstrom *et al.* 1982:8). Ketchum (1983:12) notes that whiteware, like yellow ware, was produced in molds. Tableware was the most common product and included plates, bowls, cups, saucers, and various serving pieces. Although whiteware products from the Staffordshire potteries dominated the market for most of the nineteenth century, towards the end of the century American companies, located primarily in New Jersey and Ohio, were each manufacturing 12 or more patterns in high-quality earthenware. Whiteware almost always is decorated, with handpainting and transfer printing being the most common methods of applying decoration.

When used by historical archaeologists analyzing nineteenth-century ceramic collections, *ironstone* refers to a ware intermediate between earthenware and porcelain, due to the inclusion of china stone, or petunse, in the paste (Collard 1967:125; Price 1979:12). However, it technically is classified as an earthenware, and it is aptly described by Lofstrom *et al.* (1982:8) as a "thick, heavy, hard earthenware exhibiting a cold, grayish color." Following South's (1974) lead, ironstone is grouped together with whiteware in many analyses (e.g., Price 1979). However, we concur with Lofstrom *et al.* (1982:8) that the two can be separated, though it is not always a simple task. For example, measurements of paste hardness on a single vessel can vary widely. In addition, as

certain whitewares became more refined toward the end of the nineteenth century, vessel hardness often approached that of ironstone. Ironstones often appear undecorated and should be viewed apart from the yellower (cream-colored) wares that are merely a variant of the standard whiteware body with no decoration (Lofstrom *et al.* 1982:10). Miller (1980:3) notes that the distinction between plain white ironstone and undecorated cream-colored vessels is quite significant in economic terms, as the ironstone vessels were higher priced.

Ironstone found in pre-1870 midwestern sites is invariably of British origin. Even after 1870, when factories in New Jersey, Ohio, and Maryland began producing ironstone in imitation of English shapes and patterns, the British product remained more popular with American consumers. Most American companies did not mark their ironstone products, except for the larger pieces such as pitchers, serving bowls, and platters. However, those that did use backmarks would often blatantly imitate British coat of arms or royal garter marks in an attempt to make their products more saleable (Ketchum 1983:12). It must be noted that our use of the term ironstone in a generic sense (as used by Lofstrom *et al.* 1982:8) should not be confused with the use of "Ironstone" as a specific trade name. The ironstone/ironstone dyad, which can create as much confusion as the cream-colored ware/creamware distinction, warrants further discussion.

Based on her monumental study of nineteenth-century pottery and porcelain in Canada, Collard (1967) defines two distinct phases in the history of ironstone in the Canadian market—phases that are applicable to the distribution of ironstone in the frontier United States. The first type of ironstone was a finer, dense, earthenware influenced by, and developed as a competitive response to, oriental porcelain. It was relatively costly, more showy, and definitely a limited-access, high-status good (Collard 1967:125). Josiah Spode made a commercial success ca. 1805 of marketing a fine-grained, high-fired earthenware he called Stone China, which approximated porcelain in terms of hardness. Eight years later, Charles Mason introduced what he called "Mason's Patent Ironstone China," and claimed that it contained "slag of iron" (Collard 1967:127). John and William Turner had patented a similar ceramic body in 1800 and undoubtedly influenced both Spode's and Mason's inventions, since as Collard (1967:125-26) notes, "little was done in Staffordshire that was not immediately known to everyone else." Both of their wares were faintly tinted blue-gray to resemble Chinese porcelain, and decorative patterns imitated oriental prototypes.

After 1850, the second type of ironstone was developed by the resourceful and adaptable Staffordshire potters as a response to the influx of inexpensive hardpaste porcelains from France. These Victorian-period wares

were as durable as earlier nineteenth-century products but generally were heavier and less expensive. They were advertised as being suitable for the "country trade" and became ubiquitous in frontier households (Collard 1967:125-30, 132). The old names for ironstone were retained in various forms, but the wares were very different from the products of Spode and Mason. Some of the newer wares continued to imitate oriental designs (e.g., flow blue handpainted decoration and gaudy underglaze/overglaze polychrome patterns, such as the popular blinking-eye motif produced during the 1850s and 1860s). After mid-century, ironstones were either left plain or embellished with unpainted molded geometric, foliate, or floral motifs (Collard 1967:129-30; Lofstrom *et al.* 1982:10). The blue-gray tint of the early ironstones gave way to a whiter tint that simulated the gray-white color of French porcelain.

A number of British potters used names that played upon the idea of porcelain, such as "Opaque Porcelain" and "Demi-Porcelain," which referred to what others simply called stone china or ironstone. Some manufacturers even used French names, such as "Porcelaine de Terre" (John Edward and Co. trademark, 1880-1900, cf. Godden 1964:231) and "Porcelaine Opaque" (Collard 1967:130). No other ware had so many synonyms. In addition to the obvious "ironstone china," popular variants included "white granite," "semi-porcelain," "hotel ware," and "stone china," often with several of the names combined on one piece (Collard 1967:131; Ramsey 1947:153).

Both types of ironstones discussed above developed as British commercial responses to foreign competition—first oriental, then French. Further refinements, however, were linked to changing consumer preferences. By the late 1800s, heavy ironstones became outdated. Collard (1967:135) notes that contemporary American writers on ceramics and taste began equating ironstone with lower-class status. Elliott (1878:341), for example, compared using thick white granite cups to drinking out of a horse trough, and Prime (1878:409) expressed the hope that public taste everywhere might be elevated ". . . if we could expel from all tables, hotels, restaurants, and private houses the white stone-wares [ironstones], cups a half-inch thick, and go back to such blue-and-white as almost every family in the country used forty years ago." Based on dates derived from backmarks, we note that during this period (ca. 1850-1900) there was a shift in the composition of the Cannon assemblages from heavier, plain or embossed-edge ironstones to lighter-weight embossed ironstones with more delicate floral or abstract motifs.

Porcelain

There are two basic types of porcelain: *hardpaste* and

softpaste. The secret of hardpaste, or true, porcelain lies in taking up insoluble white kaolin clay in a feldspathic flux (petunse or china stone), which yields a translucent, highly impermeable paste when fired at high temperature (Cotter 1968:708). Porcelain clays are extremely difficult to shape and are always cast in molds (Ketchum 1983:21). The glazes used on porcelain are always alkaline mixtures (Ramsey 1947:156). Although Chinese porcelain was being manufactured as early as the Tang dynasty (A.D. 618-907), it was not until the Ming dynasty (A.D. 1368-1644) that Chinese potters began to exploit the technical possibilities of the ware (Hughes and Hughes 1968b:16). Chinese porcelain was imported to England during the sixteenth century, but little was shipped to the rest of Europe until after 1600. Many attempts at duplicating hardpaste porcelain were made in Europe beginning ca. 1450 (Hughes and Hughes 1968b:18), but the formula for true porcelain was not recreated until 1710 in Germany, 1770 in France, and 1792 in England (Cotter 1968:7).

Experiments in porcelain making led to the development of two types of softpaste porcelain: *glass-frit porcelain* and *bone china* (Cotter 1968:7). The former contained a vitreous frit—a mixture of white sand, gypsum, soda, alum, salt, and nitre melted together in a mass, then broken and pulverized. Glass-frit porcelain was fired before and after glazing, at temperatures much lower than those required for hardpaste porcelain, which resulted in an appreciably softer ware, sensitive to sudden temperature changes. The end product had a creamy or ivory surface with a waxy feel because of the glaze (Hughes and Hughes 1968a:125).

Bone china, first marketed in Britain by Josiah Spode during the 1790s, is intermediate between hardpaste and softpaste porcelain. Its translucency is due to the formation of a glassy material that results from combining bone ash and silica. The paste is whiter and more durable than that of glass-frit porcelain. The basic formula, standard to this day, consists of paste—bone ash (6 parts), china stone (4 parts), kaolin (3.5 parts); and glaze—silica, potash, and lead oxide (Hughes and Hughes 1968a:23-24; 1968b:21).

Hughes and Hughes (1968b:21-22) note that on hardpaste porcelain, painted decoration usually was applied underglaze, directly onto the biscuit ware. The colors then were baked onto the biscuit with a low-heat firing. After glazing, the piece was refired at a much higher temperature, which fused the body with the glaze. The intense heat of the glazing oven tended to spoil most underglaze colors except for cobalt blue, though black, brown, yellow, green, and red examples are found occasionally. Overglaze decoration applied without a subsequent protective glaze could be done in an unlimited array of colors. With softpaste porcelains, the first firing was at a higher temperature. Underglaze

colors sank slightly into the biscuit, while overglaze colors were fixed by refiring at a lower temperature than that of the original glazing.

Several tests can be used to distinguish hardpaste from softpaste porcelains (Hughes and Hughes 1968a:125-26, 1968b:21). If one holds a hardpaste sherd at an angle to the light, the glaze is rather dull and the light is not reflected. On a softpaste sherd the glaze and color gleam together. A broken piece of softpaste porcelain exhibits a rough, granular paste, while that of hardpaste porcelain will be flint-like, curving off from the point of percussion. Softpaste porcelain can be marked when scratched by a finger nail; hardpaste porcelain will resist a steel file (Cotter 1968:25). Ramsey (1947:156) notes that hardpaste porcelain is nonabsorbent and softpaste porcelain is slightly absorbent. However, if no unglazed surfaces appear on a vessel, the only distinction between pastes is the color: Hardpaste has a bluish tint and softpaste a creamy tint.

Small quantities of both hardpaste and softpaste porcelain were present at the five Cannon sites, occurring as early as the 1830s as tea sets. Almost all porcelain recovered from the Cannon sites is of the softpaste variety, and though we did not make the distinction, it probably is bone china rather than glass-frit porcelain. It almost certainly is of British rather than continental European or American origin. Continental potters emphasized true porcelain production. Softpaste bone china was the predominant variety in Britain, though some British factories continued to produce glass-frit porcelain into the 1860s (Cotter 1968:14). Unfortunately, very few softpaste vessels are backmarked. However, the one marked example from the Cannon assemblages is of British origin. American companies such as Bonnin and Morris of Philadelphia were attempting to make bone china on a profitable basis by ca. 1770 (Cotter 1968:7), but they were unable to compete effectively with the Staffordshire potteries until the 1890s (Ketchum 1983:13).

Advances in Classification and Description

Despite the problems involved in distinguishing among ware groups, and the fact that many ceramic classifications based on wares contain internal problems and inconsistencies, there are archaeologists who recognize these shortcomings and who have attempted to overcome them. These individuals have made significant contributions to the categorization of nineteenth-century ceramics, in part through their recognition of the need to develop the most analytically reliable scheme in terms of their ultimate research goals, and in part through their abilities to fine-tune their systems *before* moving to the next analytical level.

Lofstrom (1973, 1976) and Lofstrom *et al.* (1982) present refined typologies of nineteenth-century earthen-

wares based on the analysis of pottery from numerous military and fur-trade sites. They organize their data around the ware concept, though decorative attributes are used to refine the typology.

The work of Price (1979) on nineteenth-century ceramics from domestic contexts in southeast Missouri is an attempt to standardize the terminology so loosely applied in historical-ceramic analyses. She grapples with the pearlware/whiteware distinction and cautiously presents a type-variety scheme that emphasizes decorative attributes rather than wares.

The work of Miller (1973, 1974, 1980) and Miller and Hurry (1983) on ceramic classification and the role of ceramics as economic indicators in the nineteenth-century cultural milieu is highly significant. One contribution of their work is the replacement of traditional categorization by ware groups with one based on decorative attributes. Miller (1980:1) notes that archaeological classification of nineteenth-century ceramics is an outgrowth of the study of seventeenth- and eighteenth-century materials, which usually are separated into porcelain, stoneware, and earthenware. These broad categories are further subdivided into wares, such as creamware and tin-glazed earthenware. This scheme is valid for seventeenth- and eighteenth-century ceramics because of the recognizable differences among the wares. Archaeological terminology used to describe assemblages (e.g., creamware and tin-glazed earthenware) follows that used by potters, merchants, and consumers during those centuries, allowing for close agreement between archaeological and historical data bases.

The nineteenth century witnessed a completely different situation. By 1790, England dominated the world ceramic-tableware trade; most tableware, teaware, and toiletware produced during the nineteenth century was almost entirely of British origin. Glaze and paste distinctions among creamware, pearlware, whiteware, and stone china produced during that period are minor compared to those among earlier seventeenth- and eighteenth-century wares. Historical research by Miller (1980:2-3) indicates that nineteenth-century ceramics were referred to and marketed by the types of decoration they received rather than by ware. Slight differences in glaze and paste should be viewed as part of a continuum of development rather than as discrete sets of changes.

CHRONOLOGICAL PLACEMENT OF CERAMIC TYPES OR SITE ASSEMBLAGES

As formal-temporal syntheses, ceramic classifications provide the historical archaeologist with a framework in which to place a ceramic assemblage. By combining a

knowledge of the dates associated with diagnostic ceramics or "horizon markers" (based on ware type or decorative variety) and the relative proportions of various categories contained in a site assemblage, the archaeologist can begin to bracket temporally a particular site or site component.

The date of manufacture of a ceramic type can be found in account books, bills of lading, newspaper advertisements, company histories, and patent records (Cushion 1980; Miller 1980; South 1977). The date of manufacture obviously does not coincide with the date an object is deposited in the archaeological record, but it provides a *terminus post quem*, or the date after which an artifact found its way into the ground (Noël Hume 1970:11). Backmarks are also important for the kinds of information they provide for dating ceramics. Styles of marks are associated with specific ceramic producers, and certain marks often can be dated to shorter time spans within a company's existence. Because of their importance, we discuss below in some detail backmarks and how to use them.

Backmarks

Backmarks impressed, transfer printed, or painted on the undersides of ceramic vessels provide important information on date of manufacture, company affiliation, importing practices, and other types of marketing information. Backmarks can be workmen's marks, seals, or motifs signifying a particular company, a pattern name, and/or an importer. Cushion (1980:5) notes that marks may be applied to pottery in any of the following ways, singly or in combination: (a) by incising or scratching the soft, unfired clay; (b) by impressing one or more stamps into the unfired paste; or (c) by painting, transfer printing, or stenciling over or under the glaze.

Workmen's marks, in the form of numbers, letters, or some other identifying signs, often were scratched or impressed into the biscuit before firing, solely for the information of the management of the pottery. "Throwers" and "assemblers" used a scratched mark, while painters (including transfer printers) and gilders left their mark in color or in gold. Impressed marks might also refer to the composition of the paste, to the mold number, to a specific vessel size, or they might provide information to the kilnmaster as to vessel placement in the firing oven (Collard 1967:324; Cushion 1980:4). Little (1969:36) notes that impressed and printed letters and numbers can also be tally marks used by workmen.

When workmen's marks are found alone on a vessel, they rarely can be attributed to a particular factory. However, impressed marks of various sorts frequently are found together with identifiable transfer-printed manufacturers' marks. Yet even when workmen's marks

can be attributed to a particular factory, it is difficult to pin down the exact meaning of a symbol, a number, or a letter. Nonetheless it is important to recognize them for what they are and not to confuse them with other types of marks that ultimately are more informative. American-made vessels are less likely to exhibit workmen's marks; instead, stamped or printed manufacturers' marks often include a "batch" designation, indicating the year the pottery was produced, as well as other information regarding the particular ware.

The majority of nineteenth-century British-company marks are sharply defined underglaze black transfer prints, with other colors such as green, blue, and rust occurring less frequently. Many marks combine a stock design with the name of the manufacturer. The three most commonly used motifs are illustrated in Figure 17—the royal arms, the royal garter (strap and buckle), and the Staffordshire knot. Other designs include the Prince of Wales feather crest, crowns, and the eagle, the latter especially common among potters who competed

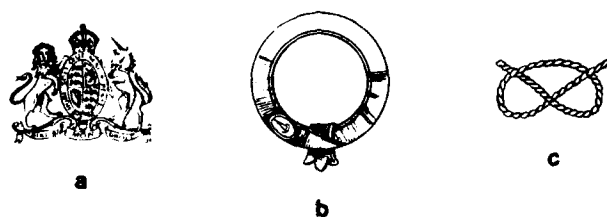


Figure 17. Stock designs used as makers' marks on nineteenth-century British refined earthenware: a, royal arms; b, royal garter; and c, Staffordshire knot (from Godden 1972).

for a share of the American market (Godden 1972:257; Little 1969:36-37). In addition to the company insignia, a typical mark also might contain a printed pattern number, the name of the particular body used (ironstone, ivory body, etc.), any number of workmen's marks (Collard 1967:324), or even a diamond-shaped patent-office registration symbol incorporated into the design.

Very little American-made pottery was marked before 1850, but after mid-century, factory marks became more common. One reason for this was an attempt by American potters to convince consumers to abandon their long-standing preference for imported British wares. Familiar British symbols were pirated and used through the late 1880s. Even diamond-shaped marks occasionally were used in American marks (Gates and Ormerod 1982:9-10). In general, transfer-printed marks on nineteenth- and early twentieth-century American pottery tend to be of poorer quality than their British counterparts, and often are blurred and difficult to read. Marks dating from 1875 to 1910 tend to be either quite

elaborate, employing varied shapes and designs, or very simple, displaying the company name, shape, or pattern information in script or block letters. Later marks, dating from 1910 to the present, tend also to be straightforward listings of company name, etc., and if a motif is present it generally is highly stylized (Gates and Ormerod 1982:10-11). While most transfer-printed American marks probably were applied underglaze, the plain company-name marks generally were stamped or stenciled over the glaze in black or dark green and were subject to fading.

Company records allow one to assign definite time spans to many marks. Gates and Ormerod's (1982) study of marks on nineteenth- and early twentieth-century pottery from the East Liverpool, Ohio, district is a pioneering effort to catalog the marks from a major American ceramic district. Except for their study, works chronicling the American pottery industry have tended to lack the detailed information on company histories needed to identify often rapidly changing backmarks. Godden (1964, 1972) and others (e.g., Cushion 1980; Thorne 1947) have provided a wealth of data that often can be used to date backmarks to very short time spans. Even if one encounters a partial mark, or one that is not listed in sources such as those mentioned above, there are various details of British marks that offer clues as to their temporal placement.

Variations of the royal arms were used from the early nineteenth century on. Pre-1837 arms have an inescutcheon, or extra shield, in the center, while arms used after 1837 have a simple quartered shield. The royal garter was incorporated in marks from the 1840s on, and the Staffordshire knot was used beginning in 1845, though it was most popular during the 1870s and 1880s (Godden 1964:552). The use of "Ltd." with a company name indicates that a vessel dates after 1855. Individual companies began using "Ltd." at different times, however, and its use on vessels made in the Staffordshire district suggests a date after 1860. "Trade Mark" or "Trademark" incorporated in a label signifies a post-1862 date, and "Royal" indicates a date after mid-century (Godden 1972:257). It previously was thought that potters added "England" to marks from 1891 on, in compliance with the American McKinley Tariff Act that mandated the identification of origin of all goods exported to America (Godden 1964:552). However, Godden (1972:257) and Collard (1967:323-24) suggest that a post-1880 date is more accurate, since several marks with the word "England" appear in Jewitt's 1883 edition of the *Ceramic Art of Great Britain*. When "Made in England," "English Bone China," or "Bone China" appear on a vessel, a twentieth-century date is indicated. A date incorporated as part of a British factory mark is more likely to refer to the founding date of the factory than to the actual manufacture date of the vessel (Collard 1967:324).

Wares having an impressed or transfer-printed diamond mark can be dated to within a few years of their manufacture. The diamond mark was used from 1842-83 to indicate that a particular design was registered with the British Patent Office by the manufacturer (British or otherwise), retailer, or wholesaler. The various letters and roman and arabic numbers contained within the diamond mark can be deciphered to give the exact registration date for a ceramic design (see Figure 18). Once all or part of the mark is decoded, one has only to locate the date in the *Class IV Design Index* from the British Public Record Office to find the patent number and the name of the firm that registered the design.² The latter information is especially useful, since diamond marks often appear without the manufacturer's name. The index does not list the actual item being registered, though printed diamond marks on vessels usually refer to the applied pattern (raised design, transfer-printed pattern name, etc.), while impressed or molded versions more likely relate to the form of the ware (Collard 1967:325-27; Cushion 1980:172). Collard (1967:326) notes that only those designs likely to be pirated were registered. It is important to use diamond-mark dates as *terminus post quem* dates only, since although the initial registration protected a design for three years, it could be renewed for another period.

Beginning in 1884, the British Patent Office replaced diamond marks with consecutive registration numbers, which were imprinted on vessels and preceded by "Rd." or "Rd. No." By 1900 more than 350,000 designs had been registered (Collard 1967:326; Cushion 1980:5). Cushion (1980:172) lists the range of numbers used for each year between 1884 and 1909.

During the nineteenth century, some colonial china merchants ordered wares from British potteries with their own names printed on the back, and a researcher must take care not to confuse these with manufacturers' marks. These dealers' and importers' marks generally can be dated with precision by checking gazetteers or city directories to see when a particular single businessman or partnership was in operation (cf. DeBarthe 1979:75). Collard (1967:99) notes that such marks serve three important historical purposes: (a) They illustrate the dealings of retail and wholesale china merchants (thus providing insights into nineteenth-century economic history), (b) they are an unusually reliable guide to wares actually offered for sale and in use in a particular area, and (c) they provide accurate evidence for the periods when such wares were new furnishings for colonial homes. Early retail and/or wholesale dealers' and importers' marks usually did not include the maker's

identification. However, the actual maker occasionally can be ascertained if the vessel also happens to carry the manufacturer's diamond-shaped registration mark. Most earthenware and porcelain with dealers' marks date to the last quarter of the nineteenth century, though earlier examples do occur (Collard 1967:89, 92).

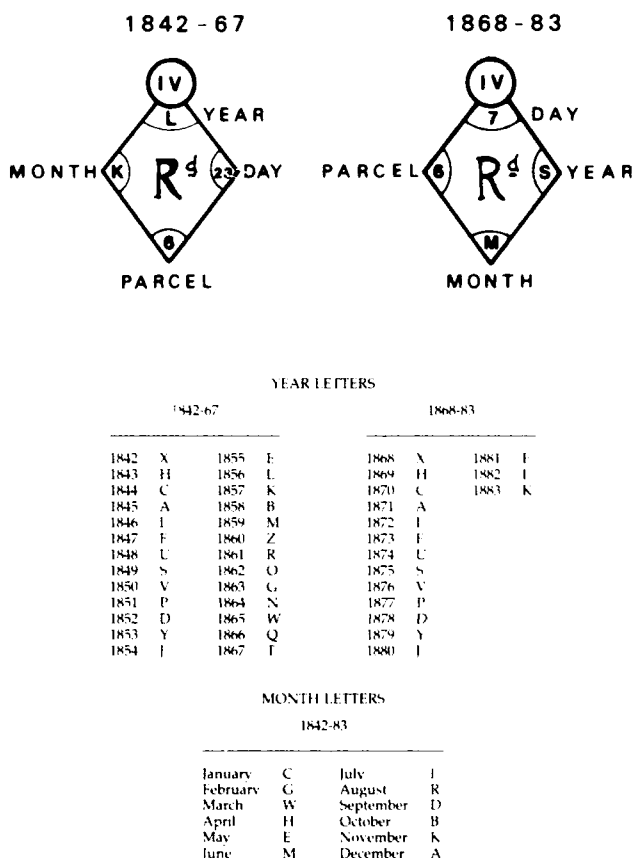


Figure 18. Key to features on the diamond-shaped Patent Office registration marks used on British goods manufactured between 1842 and 1883. The mark on the left was used between 1842 and 1867, the mark on the right between 1868 and 1883. The two examples illustrate the different positionings of letters and numerals used to indicate year, month, day, and parcel number. The roman numeral IV indicates that the class of material being registered was ceramics. Year and month codes are presented below the examples. The major exception to the codes is the period March 1-6, 1878, when the letter W, instead of D, was used to indicate the year, and the letter G, instead of W, was used to indicate the month.

Different styles and colors of marks can provide clues to the nature of the ware and/or the decorative attributes of a vessel. For example, around 1800 Josiah Spode II initiated the practice of printing the name of the transfer-printed engraving used on the vessel on the bottom of the piece. Soon after, pattern names were

²Cushion (1980:173, 210) reproduces that part of the *Class IV Design Index* relating to pottery and porcelain

placed within ornamental scrolls, and by the period 1830-40, foliated and flowery cartouche and wreath marks were used almost universally (Little 1969:35, 96).

Transfer-printed vessels and their associated pattern and manufacturers' marks are almost always the same color. Many of these marks contain no reference to the actual manufacturer, but as Little (1969:31) notes, occasionally the factory can be identified by the shape of the cartouche or scroll in which the pattern is printed. Many undecorated ironstones have transfer-printed black manufacturers' marks that use the royal-arms stock design along with the company name. Other decorative types, such as spatter ware, annular/slip-banded ware, those with handpainted floral or shell-edge decoration, and much of the early softpaste porcelain, rarely are backmarked.

In summary, although backmarks on nineteenth-century ceramics are one of the most important temporal clues available to historical archaeologists, they often are misleading and must always be considered in the proper historical context. Collard (1967:325) reminds us that "the appearance of the mark itself and the type of ware on which it is found has always to be reconciled to any statement concerning date." Also, many ceramics never were marked. In the following excerpt, Little (1969:35) is referring to later Staffordshire Blue transfer-printed wares (ca. 1830-50), though what he says is equally applicable to nineteenth-century refined earthenwares in general:

Some of the later potters, and perhaps some of the earlier, lesser-known ones, seem to have made a point of not marking their wares, possibly in order to be able to compete more easily with better-known makers . . . Cases even occur where firms deliberately used misleading marks, hoping they would be mistaken for those of an old-established, more reputable potter. Others, however meticulous they may have been in applying marks, were accustomed to marking only a certain number of pieces in each service, obviously never dreaming that individual pieces might one day be sought by collectors.

Other Dating Methods

Using the median manufacture date (the point between the beginning and end manufacture dates) of specific ceramic types, South (1972, 1977) developed a dating technique he termed the *mean ceramic date formula*. This formula considers both frequency of occurrence and presence/absence data for a group of ceramic types from a historical site. The formula is based on two assumptions: (a) that the ceramic types under analysis are roughly contemporary on all sites at which they are found and (b) by implication, that the midrange date of manufacture approximates the modal date of popularity (Lofstrom *et al.* 1982:3; South 1972:73). The date derived by the formula then can be used in conjunction with historical data, or with *terminus post quem* dates, to arrive at an interpreted occupation period for a site

(South 1977:216).

The correlation between actual dates of site occupation and mean ceramic dates are quite high for seveneenth- and eighteenth-century ceramic types (cf. South 1977:252-71). However, application of the formula to nineteenth-century materials has produced uneven results (Lofstrom *et al.* 1982; Smith 1976; Waselkov 1979; Waselkov *et al.* 1975). Lofstrom *et al.* (1982:3) modified the formula for use with late eighteenth-century ceramics by considering actual vessel counts per type (rather than simply by using sherd counts per type as in the original formula) and by adding a constant—1700 for the eighteenth century and 1800 for the nineteenth century.

Rapid industrialization and technological advances in the field of ceramic production throughout most of the nineteenth century are cited as reasons underlying a need for a dating system that provides more precise temporal brackets than those given by ware-type manufacturing ranges. The *mean popular dating concept*, which isolates particular decorative techniques and their periods of popularity, has been proposed as an alternative (Burke 1982; Jacobs 1983; Lofstrom *et al.* 1982). Popularity periods are defined on the basis of historical documentation and information from dated archaeological contexts. Peak-popularity dates are substituted for median manufacturing dates in South's mean ceramic date formula. Jacobs (1983) applied the popular dating method to a ceramic sample recovered from a nineteenth-century military midden from the Butler's Barracks complex at Niagara-On-The-Lake in Ontario, Canada, to arrive at a date that agrees with the documentary evidence. The dating method also provides a means for extracting socioeconomic implications from the data, which we discuss below. Neither mean ceramic dates nor mean popular dates were calculated for the Cannon assemblages. In retrospect, the use of one or both of these methods may have aided us in bracketing distinct time periods within an assemblage.

CULTURAL GENERALIZATIONS

Many historical archaeologists have gone beyond ceramic classification to discussions of chronological inference, but relatively few have successfully extracted cultural generalizations from their data. Notable exceptions include (a) South's (1977) work on refuse disposal patterns, artifact assemblages, and ethnic associations; (b) Miller's research on economic scaling of nineteenth-century ceramics (1980) and on ceramic supply and demand patterns in an economically isolated frontier community (Miller and Hurry 1983); (c) Jacob's (1983) refinement of Miller and Hurry's (1983) scaling; and (d) Otto's (1977) work on ceramics as status indicators. We discuss below the works of South, Miller and Hurry,

and Jacobs; Otto's work is discussed in Chapter 5.

South has amassed a great deal of quantitative data relative to the proportions of various artifact groups (e.g., kitchen and architectural items, arms, furniture, etc.) at sites that have different cultural and functional associations. Using information from functionally similar sites, he defines patterns that later can be used predictively in situations where cultural or functional associations are unclear. For example, South (1977:141-64) defines the *frontier artifact pattern* for middens that have high percentages of architectural items, medium-range percentages of kitchen-related items and tobacco pipe fragments, and low percentages of arms, clothing, and furniture-related materials. He contrasts this with the *Carolina artifact pattern* (1977:83-139), found in middens at different types of sites of British colonial origin. This pattern yields high percentages of architectural items and low percentages of kitchen-related artifact groups, with other classes of items represented by very small percentages.

The inverse relationships between like artifact groups in each pattern might result from shorter occupations of frontier sites, or from the fact that frontier sites were more isolated from the main supply sources of domestic artifacts. These and other alternative postulates directed at explaining the artifact patterning seen at frontier sites can be tested through excavation of historically known frontier sites and by closer examination of the classes comprising the artifact groups (South 1977:146-47).

Instead of focusing on pattern recognition using all artifact groups, Miller's research considers the role of ceramics as economic indicators. As mentioned above, Miller developed a typology of nineteenth-century ceramics that is based on decorative elements. His examination of nineteenth-century documents such as price-fixing lists, account books, bills of lading, and newspaper advertisements, all of which contain cost information for various vessels according to how they were decorated, revealed the classification used by potters for their products. His four levels of classification are arranged according to increasing cost (Miller 1980:2-4). They include (a) undecorated, or cream-colored (cc), vessels; (b) minimally decorated ceramics (showing a low level of expertise) such as shell-edge, sponge-decorated, and annular-decorated vessels; (c) painted vessels with slightly more intricate, standardized patterns such as flowers, leaves, and stylized Chinese landscapes; and (d) transfer-printed vessels.

Miller (1980:15) notes that during the nineteenth century, ceramic prices declined at a faster rate than did commodity prices in general. Undecorated cream-colored-vessel prices were fairly stable, however, and provide a useful scale against which to measure changes in the value of other decorated types. Using the documented prices of these vessels, Miller created "cc index

values," which can be used to calculate the average cost above cream-colored vessels from archaeological sites and inventories, allowing sites to be scaled in terms of expenditure on ceramics.

The only ware designation in Miller's classification is undecorated cream-colored ware. Jacobs (1983:5) refines Miller's levels and combines ware types and decorative methods into a hierarchical system, to generate a socioeconomic perspective on the ceramic collection from Butler's Barracks. She places plain ironstone as a ware type after Miller's level-4 transfer printed, with porcelain (decorated and undecorated) at the top of the scale. The individual peak-popularity periods for each ceramic type then are viewed in relation to the mean popularity date of the entire assemblage to determine if particular types were being used during the time of their maximum popularity. Jacobs (1983:8) indicates that this method may provide information on the status represented by a particular ceramic assemblage. On the other hand, differences in the proportions of decorative types represented, or the presence/absence of a type with regard to its popularity period, may be a result of a noncontinuous supply situation, such as that documented by Miller and Hurry (1983) for the Case Western Reserve area.

There may be two reasons why so few historical archaeologists have taken "that next step from data to theory" (South 1977:235), i.e., have progressed to the level of processual explanation. First, the basic building blocks of classification and chronology must be in place before the next analytical step is taken. It is clear from the archaeological literature that refinements in methods used to construct these blocks are needed for nineteenth-century ceramics. Second, archaeological materials, including ceramics, often are not up to the analytical tasks to which they are placed. For the historical period, there may be so many documentary sources for an area that archaeological materials can assume an auxiliary role in analysis. Archaeologists who rely solely on the analysis of material culture, ignoring the written sources, will quickly find that their efforts toward deriving an understanding of cultural process fall short of the potential mark. We agree wholeheartedly with South (1977:235) that the historical archaeologist is "in the unique position of being able, through archival records, to control certain variables while delineating archaeological patterning, an advantage not possible in the absence of documentation."

METHODS USED IN ANALYZING CERAMICS FROM THE CANNON REGION

If the classification of cultural material is approached

as part of an overall research design that stresses hypothesis testing, then replicable methods for placing items in categories must be created. Whether a given scheme is based on a taxonomic or a paradigmatic model, and whether it is elegant or simplistic, is irrelevant as long as the scheme provides the basis for a clearer understanding of the material it purports to categorize. A system for classifying nineteenth-century ceramics, for example, should be straightforward and easy to use by historical archaeologists, regardless of whether they are ceramic experts. We considered this point thoroughly before developing the system described here.

Our original objective with regard to the classification of ceramics from the Cannon region was to produce a paradigmatic classification (as opposed to a taxonomic classification) for nineteenth-century ceramics, composed of "an exhaustive combination of unweighted attributes such that all attributes in the system are equally important and all classes have the same amount of information" (O'Brien *et al.* 1980:12; cf. Dunnell 1971). Paradigmatic schemes facilitate a shift in focus from one set of variables to another, as research questions change.

There are, however, several potential drawbacks to the paradigmatic approach—drawbacks that can, under certain circumstances, be alleviated by using taxonomic classification. Taxonomy displays several advantages over paradigmatic classification—advantages that weighed in favor of our selecting taxonomy as our classification method. First, it is more sophisticated and is capable of illustrating more complex relationships between and among classes than can paradigmatic classification. In cases where nonequivalent relationships must be shown, taxonomy is the *only* classificatory system that can be employed (Dunnell 1971:83). But, for the classification to be more than an intuitively-based device, it must have paradigmatically-defined classes as a base (Dunnell 1971:84). How the dimensions of the classification are selected is left to the investigator. Dimensions are chosen with the expectation (a) that the classes formed by the association of attributes of various dimensions will

bear on the research problem being investigated and (b) that the classes can be interpreted in a meaningful fashion.

The system that we developed could, in a relaxed sense of the word, be termed a taxonomy. It is a hierarchical system based on levels of decisions that nineteenth- and early twentieth-century potters made in deciding (a) if a vessel was to be decorated and (b) if so, how. The relationships between and among classes are, in many cases, nonequivalent, as we discuss in Chapter 3. The system is based on decoration, with other variables, such as kind of ware, relegated to a descriptive status.

During analysis, emphasis was placed on minimum vessel counts from each ceramic assemblage. Where possible, individual sherds from each site were grouped into vessel lots that then were analyzed as single units. Lofstrom *et al.* (1982:4) note that even though the determination of vessel counts is a time-consuming process, it produces units that had a functional reality in the past cultural systems that generated their archaeological provenience. The use of minimum vessel counts also reduces the possibility that counts are biased by an overrepresentation of sherds from more easily broken early nineteenth-century vessels, and by an underrepresentation of sherds from more durable later ceramics (e.g., ironstones).

Each vessel is described in terms of (a) the total number of sherds that represent it, (b) vessel form (cup, plate, saucer, etc.), (c) lip form (scaloped-circular, regular-circular, etc.), and (d) decoration. Information also is included on ware type and whether a vessel is part of an identifiable set. If a vessel is backmarked, the mark is described and, if possible, identified.

We decided to omit stoneware from our analysis because as a ware it spans the entire nineteenth century with very few changes, except for some slight modifications in form. In addition, stoneware was made locally throughout the Midwest by individual small-scale pottery operations, and most of it is unmarked and difficult to date.

THE CERAMIC CLASSIFICATION

Our classification of decorative elements is based (a) on our assessment of the decorative attributes of each vessel in the assemblages from the five excavated sites, (b) on ceramic descriptions made by other archaeologists, (c) on published references to nineteenth-century ceramic technology, and (d) on information from ceramic collectors and antique dealers. We attempt to reconcile differences in terminology wherever possible.

We contend that researchers will make more accurate assessments of ceramic assemblages if they analyze them along decorative lines. Each unit within our system is straightforward, and as additional categories are discovered, they can be added without changing the basic structure of the system. The terminology used is general enough that it does not presume a detailed knowledge of nineteenth-century ceramics in order to apply it. When supplementary information is available on how a specific decorative method or technique is referred to by other historical archaeologists, ceramic manufacturers, or collectors, we present that information as well.

THE HIERARCHICAL SYSTEM

The classification system is based on a model of how decisions were made by potters relative to decorating ceramic vessels (Figure 19). The first decision facing a potter is whether to decorate a vessel or to leave it plain. We define an undecorated vessel as a ceramic body that has only a clear glazed surface, i.e., after firing, surfaces more or less reflect paste color. The second decision would appear to be whether a vessel will have a raised decoration on its surface, including along the rim, on the body, or on the pedestal. Importantly, we do not include under the "raised" category those vessels that have molded, fluted, or paneled body surfaces, unless the vessels exhibit relief decoration as well. What we term "raised" decoration is referred to as "molded" by Price (1979) and "embossed" by Ketchum (1983), Lofstrom (1973), and Steinacher and Carlson (1978).

Cotter (1968:28) lists the various ways in which raised, or "relief," decoration is produced: (a) by free-hand modeling or by free-incising and piercing, (b) by pressing soft clay in molds, (c) by casting, (d) by impressing the surface of soft clay objects with metal or other stamps cut in intaglio, and (e) by molding low reliefs separately and applying them to the surface of the vessel with a slip. The types of decoration we categorize

as raised generally are produced as in *b* or *c*.

Once a potter decides whether to create relief decoration on a vessel, the choice of how to apply further decoration is open. Nineteenth- and early twentieth-century potters appear to have had four major choices: (a) to transfer print the vessel, (b) to decal it, (c) to handpaint it, or (d) to leave it plain. Occasionally a vessel was decorated by a combination of methods, and under our system the researcher must decide which features are primary and which are secondary. For example, a vessel with a raised handpainted edge and a decal decoration on the body would be classified under raised/handpainted edge, with the decal decoration noted as a secondary feature. In this case we would consider that the decision regarding the raised-edge portion of the vessel was made prior to applying the handpainted detail or decal decoration, and thus should be considered a primary feature.

There are a few other points about the hierarchical system that should be made. First, the four features shown in Figure 19 under "raised decoration"—transfer printed, decal, handpainted, and nonpainted—are *not* in themselves raised designs. Rather, they *can* occur on a vessel that has raised (relief) decoration, which usually (but not always) is found along the rim of a vessel. Two features—transfer printing and decaling—never occur over the relief decoration itself, since the paper used to apply the print or decal would not easily conform to the relief surface.

Second, because decals and transfer prints never were applied to raised surfaces, they become parallel categories under the larger taxa, "raised decoration" and "nonraised decoration" (Figure 19). Although during analysis all transfer-printed and decaled vessels were sorted by raised versus nonraised decoration, and this distinction was maintained for the tabular presentations by assemblages (discussed later in the report), there appears to be little temporal or functional significance to the distinction. Thus, in the following sections, which summarize methods and techniques used to decorate nineteenth- and early twentieth-century ceramics, we do not distinguish between, for example, transfer-printed vessels that also have raised decoration and transfer-printed vessels that do not have raised decoration.

Third, in contrast to decaling and transfer printing, there is *no* equivalence between handpainting on vessels with raised decoration and handpainting on vessels

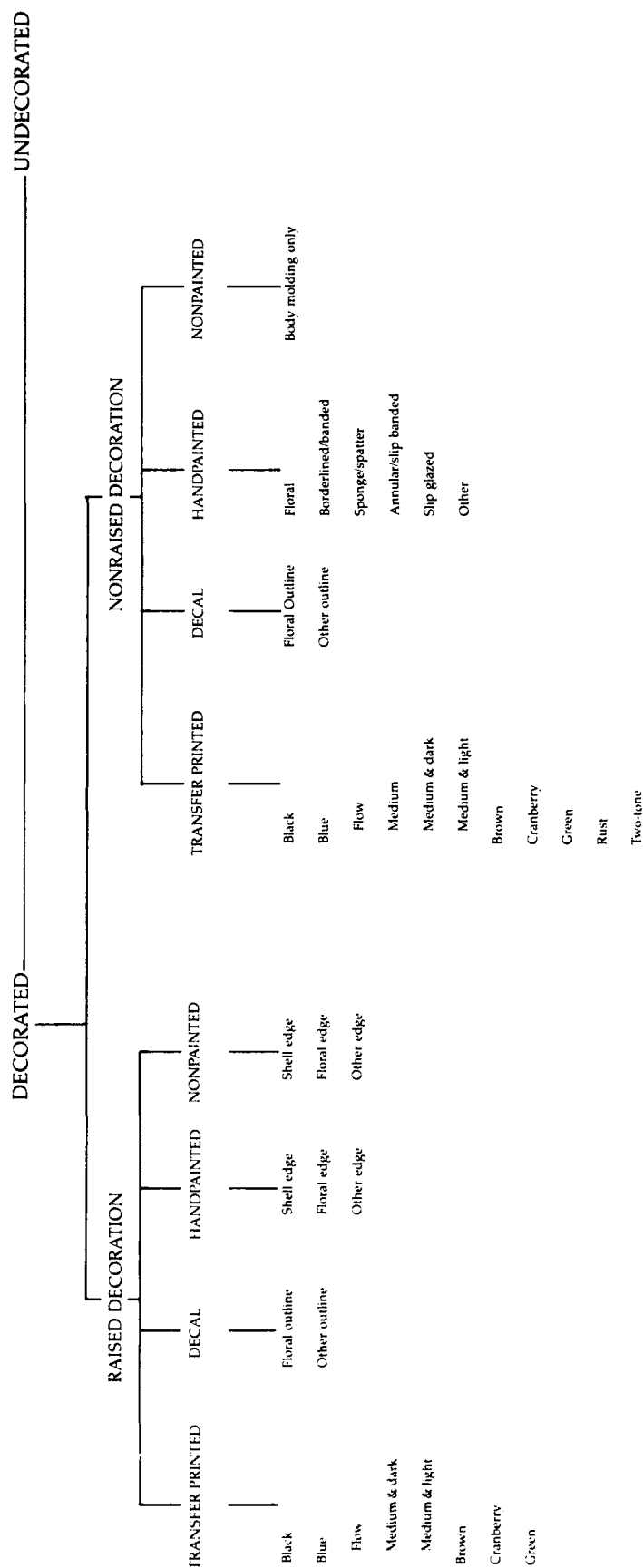


Figure 19. Taxonomic system used in the historical ceramic classification.

without raised decoration. Handpainting on vessels with raised decoration occurs exclusively on those vessels that have relief areas around the rim, i.e., on what we term "edge-decorated vessels" (Figure 19). In almost every case the raised portion of a vessel was the only area painted, usually in shades of blue or green. On vessels with no relief decoration, several methods of handpainting were used (Figure 19). Although there is a slight degree of nonequivalence among the features listed under the category "nonraised decoration/handpainted" (e.g., "floral" is a design and "sponge/spatter" is a method of applying paint), we believe the features (a) adequately represent the variability in the assemblages and (b) are easily identified and can be used by other researchers. Because of the significant differences in handpainting vis-à-vis vessels with or without relief decoration, we divide our discussion accordingly.

Fourth, we similarly divide our discussion of nonpainted vessels. For lack of a better term, "nonpainted" also implies that no decal or transfer print was applied to a vessel surface. Nonpainted vessels that fall under the larger category "raised decoration" exhibit unpainted relief around the edges. Nonpainted vessels under the "nonraised decoration" category exhibit only body molding, fluting, or paneling (termed "body molding" in Figure 19) over most if not all of their surfaces. Additional decoration on a molded vessel would cause the vessel to be placed in one of the other three categories (see Plate 5c for an example of a cup with molded vessel shape and exterior handpainted sprig motif).

Fifth, for ease in presentation our discussion of decorative methods deviates from the structure illustrated in Figure 19. As noted, transfer printing and decaling are each discussed with no distinction as to whether they occur on vessels with raised or nonraised decoration. The categories "raised/handpainted" and "raised/nonpainted" are discussed under the heading "edge decorated." Other categories appear separately.

With these points in mind we now turn to the decorative categories used to classify the ceramics. After defining each category, we summarize data on methods and techniques of application, geographic areas of production, temporal ranges of the categories, and variation within categories.

Transfer Printing

Transfer printing first was used shortly after 1750, and it is one of the few uniquely British contributions to ceramic technology (Little 1969:13). Its development probably was one reason why the ceramic industry switched from production centered around the marketing of "wares" to a strategy in which decorative technique became more important. Its immense popularity

first in various shades of blue, then in a multitude of other colors, brought about rapid changes in the composition of the glazes used on refined earthenwares.

The transfer-printing process involves several steps. Thin, engraved copper plates are coated with viscous ink (Coysh 1974:7) or stiff paste (Little 1969:19) formed by mixing various chemical compounds (according to the color desired) with powdered flint and oil. The ink is rubbed into the incised lines with a wooden tool. Excess ink is removed with a palette knife and the surface is cleaned with a pad or boss. Thin sheets of strong, nonabsorbent tissue paper are laid over the design and pressed against it, to obtain a clear impression of the engraving. After the transfer paper is removed from the copper plate and trimmed, it is applied to an unfired ceramic body. A flannel rag is rubbed over the paper, causing the oil-bound color to adhere to the vessel surface. The vessel then is immersed in water to facilitate removing the tissue paper. Before glazing, the ceramic body is given a preliminary firing at a low temperature to dry out the oil and "harden on" the color (Hughes and Hughes 1968a:149-59; Little 1969:18-19). The vessel then is dipped into glaze prior to being fired at high temperatures in a glost oven.

The process described above is for underglaze transfer printing. Overglaze transfer printing was an early technique (pre-1780) in which the print was applied over the glaze. Vessels then were hardened in a low-temperature oven. Overglaze designs were simpler and less durable than those applied under a glaze, and colors used included black, brick red, and various shades of brown and purple. Some underglaze printing was attempted during this early period, but the only color that could withstand the intense temperatures of the glost oven was cobalt blue (Hughes and Hughes 1968a:150; Little 1969:14-15).

According to Little (1969:15-17), underglaze blue printing on porcelain was in use at Worcester by 1760, but the same technique was not applied to earthenwares until ca. 1780, when Thomas Minton, an apprentice engraver from Caughley, Shropshire, designed the now-famous "willow" pattern. By the late 1780s, the leading Staffordshire potters had begun to lure skilled craftsmen away from Caughley and elsewhere. Before long, *Staffordshire Blue* earthenwares were the mainstay of the district (see Figure 20 for the locations of potteries in the Staffordshire district). The period 1820-40 was one of peak production for blue underglaze transfer-printed wares, though by the 1820s their popularity was waning rapidly as new colors, including *flow(n)* blue (popular ca. 1840-60), were introduced (Collard 1967:117; Lofstrom *et al.* 1982:14).

Flow decoration was produced by firing the vessels in an atmosphere into which volatile chlorides were introduced. The color of the printing (or painting)

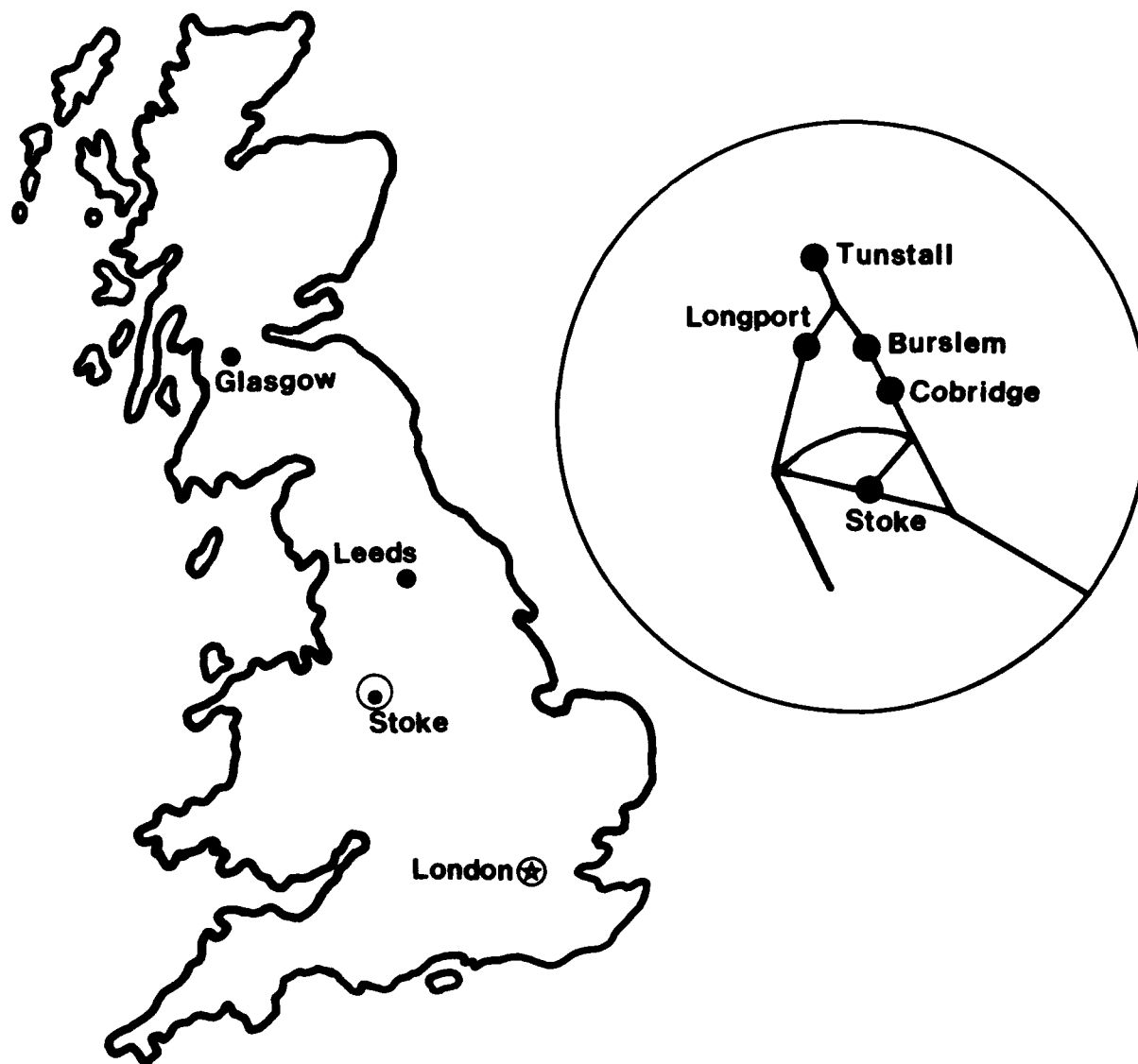


Figure 20. Map of England showing locations of Stoke (Stoke-on-Trent) and (inset) the Staffordshire pottery district (not all towns shown).

spread or flowed into the glaze, creating the much-admired blurred or misty look. A deep blue was the most popular color, but other colors were used, including flow mulberry (a shade of purplish-brown [puce] or purplish-gray). Printed wares with the flown or flowing effect (both terms were used) also were produced in black, yellow, brown, and green. Ironstone was the favorite medium for this decorative technique (Collard 1967:118).

In 1828 potters discovered that green, yellow, red, and black designs could be applied underglaze without distortion by mixing the finely powdered enamel colors with barbadoes tar (Hughes and Hughes 1968a:151). Price (1979:15) and Lofstrom *et al.* (1982:8) suggest this

shift in color palette may also have been related to the development of a leadfree glaze by John Rose of Coalport in 1820, which, since it fused at lower temperatures, allowed delicately tinted enamels to be used without the color being affected. However, since the borax used in the glaze was expensive, until the 1830s the process was limited to the production of costly services. During the 1830s leadfree glazes were applied to white earthenwares, and transfer prints in colors other than blue made their appearance (Lofstrom *et al.* 1982:8).

Although it rarely is possible to date a piece exactly, transfer-printed vessels can be dated in a general fashion by their colors, which rode waves of popularity, and more specifically by identifying manufacturers' backmarks

(see Chapter 2) and border designs. As noted above, blue achieved tremendous success as the first color used in underglaze printing. Little (1969:34) states that throughout its history, blue-printed ware was produced in every conceivable shade of the color, though the most popular early blue was the deep cobalt shade (see Plate 1a). By 1830 the English market for deep blues was saturated (cf. Shaw 1970:234-35) and other colors became popular. Collard (1967:117-18) notes that "The potters of England had an answer for this new problem. . . . they learned how to produce wares in brown, pink, lavender, green, orange, grey and a new light blue—never to be mistaken for the older, sparkling blue. . . . or the deep, sapphire blue. . . . The paler shades had appeal of their own, and the details of the engraving often tended to be clearer" (compare Plate 1a-d).

Shaw (1970:234-35) documents the appearance of red, brown, and green transfer prints in England by 1828, and Lofstrom *et al.* (1982:14) suggest an ending manufacture date of 1850 for these three colors. Black transfer prints had a popularity range of 1830 to 1850, and purple prints were popular from 1830 to 1860 (Lofstrom *et al.* 1982:9). Flow transfer prints, where the pigment bleeds into the surrounding glaze, were popular from 1840 to 1860 (Collard 1967:118; Lofstrom *et al.* 1982:9; Miller 1974:201), though Price (1979:22) suggests they may have appeared earlier than 1840. Multicolored transfer prints, which required separate color applications and firings, appeared ca. 1840 (Godden 1963:115). A process in which blue, red, and yellow could be fixed from a single transfer with only one firing was invented in 1848, and brown and green were added to the repertoire in 1852 (Hughes and Hughes 1968a:151). The two-tone transfer prints in our sample (red and blue, red and green, and red and black) are most likely of the type that required separate firings. Lofstrom *et al.* (1982:9, 14) date transfer prints having handpainted detail to the period 1840-ca. 1860. Some of this decoration is quite crude and appears unrelated to the printed design underneath (see Plate 1f).

As with blue, the colors used in transfer printing exhibit considerable variation, but we believe they are simple enough to identify by basic descriptive color terminology alone rather than by resorting to Munsell distinctions. Lofstrom *et al.* (1982:9) note that the reds in their sample range from light pink to crimson. In our sample the only shade of red is one we call "cranberry." It is unclear whether differences in the shade of a particular color (other than blue) have temporal significance or whether they merely reflect preference for, and/or availability of, a certain color. Purple is defined as a combination of red and blue pigments, and purple printed lines often show a slight blue halo where the cobalt has bled into the glaze (Lofstrom *et al.* 1982:9) (see Plate 2h).

The earliest underglaze prints on earthenwares are the willow design and other *chinoseries* patterns. Shading and other effects were produced by a series of close parallel lines and crosshatching. On early underglaze prints the detail often was blurred or smudged, and large areas of the design were left open. The engraved plate lines were cut thick to allow sufficient color to be transferred to the printing paper. After the quality of the paper improved, thinner, more deeply cut lines were used. The greatest improvement came in the early 1800s with the combination of pure line and stipple engraving. Fine-tone color gradations and shading then were possible. Concurrently, a strip method was developed for transferring continuous border patterns of repeating designs (Little 1969:18).

Before 1830, border patterns were specific to particular potters and often can be identified by the style of the design (cf. Hughes and Hughes 1968a:149, 151; Little 1969:31). Plate 1a illustrates an oak leaf and acorn pattern probably attributable to Ralph Stevenson of Cobridge (1810-32) (Little 1969:33). Borders on transfer-printed vessels produced after 1830 generally are not indicative of specific craftsmen and for the most part consist of undistinguished floral and/or abstract patterns. In this report, both the borders and the interior designs are described in the remarks section of the assemblage descriptions.

The engraved designs on transfer-printed sections of vessels—apart from the borders—tended to be anonymous, and were widely copied among potters. Often, many different designs were used to decorate pieces of the same set (Little 1969:22, 24). After Chinese-style motifs declined in popularity, scenic themes such as classical and romantic pastoral landscapes were borrowed from travel books or from books of engravings and paintings. At the beginning of the nineteenth century, portraits of country mansions and views of well-known places became popular. In addition, numerous views of American buildings and scenery were produced for the American market (Little 1969:25-26).

A few early dark-blue transfer prints were found in the assemblages from the five Cannon sites, but the majority of the transfer-printed vessels have the finely cut prints that combine line and stipple engraving. Patterns encountered in our sample include pastoral, hunting, and classical scenes, motifs with fruit and flowers, and an occasional oriental-style motif (see various examples, plates 1 and 2).

Transfer-printed vessels found at the Cannon sites generally have a regular-circular lip form. However, those few transfer-printed vessels that also have raised border designs usually have scalloped-circular lip forms. The latter combination meant more work for the pattern cutter, who had to cut a print to fit the scalloped edge. The temporal significance of the scalloped-circular

versus regular-circular lip form on transfer-printed vessels is not entirely clear.

Price (1979:19) notes that through time, transfer-printed designs became less complex and tended to occupy less and less of a vessel surface. We also found this to be the case with the Cannon vessels. By the late 1800s, transfer prints probably were limited to occasional use as border accent designs (see Plate 5j). The use of decals became popular ca. 1880 (Jacobs 1983:22), and with this less costly method potters began to decorate their products with multicolored, usually floral, designs.

Decaling

During the analysis we encountered a type of decoration rarely mentioned in the literature on nineteenth-century ceramics. These designs consist of what appear to be very light transfer-printed outlines (usually of a floral motif), with handpainted fill-ins in various colors. Only after the ceramic assemblages had been categorized and rechecked several times did we realize that what we had were multicolored decals.

After plain or sparsely decorated ironstones began to wane in popularity toward the end of the nineteenth century, handpainted refined earthenwares enjoyed a resurgence. Unlike the more crudely executed floral motifs popular ca. 1840-60 (e.g., sprig and broadline-style floral), the decal type of floral decoration is characterized by its frequent use as a border or vessel-body accent. For example, single multicolored floral decals often were used around a vessel rim as an accent motif, in conjunction with thin-line border stripes. They frequently were combined with raised-border motifs, handpainting, and gilding. Smaller designs also were portrayed in decal form, such as the spray of small flowers applied off center, below the rim on a saucer with handpainted, raised-border motifs (see Plate 4h and Figure 21b for views of the same vessel).

The decals appear to be a combination of stipple and line-engraved motifs, made by lithograph process in a variety of colors. The decals were applied to a vessel before glazing or firing, in a manner similar to that used to make transfer prints (U.S. Department of Commerce 1915:155). Decals should not be confused with motifs having a transfer-printed outline with handpainted fill-in (such as in the example of a brown transfer-printed border with handpainted pink and green fill-in shown in Plate 5j), where the handpainting is part of the originally planned design. However, some decal pieces were touched up lightly by hand to give the impression that they were handpainted (U.S. Department of Commerce 1915:156).

Decals and transfer prints often are confused in the literature. Ketchum (1971:121) uses the term "decal(c)omania" synonymously with transfer printing. Jacobs

(1983:22) lists decalcomania as a decorative technique on porcelain, having a popularity period of 1880 to 1920, but she does not define the term. We conclude that what began in the late 1800s as a less-expensive alternative to costly multicolored handpainted motifs continued to evolve as a popular decorative method through at least the mid-twentieth century, and is still used today. A study of English potteries made ca. 1913 showed that gold (for lining, gilding, and incrustations) and decals headed the list of expenditures for decorative materials (U.S. Department of Commerce 1915:156, 410).

In their summary of patterns and manufacturers of Depression-era "American dinnerware" (their collective term for ceramic tableware of the period 1930-50), Kovel and Kovel (1983:138-39) cite decaling as one of the most frequently employed decorative methods. Although decal decoration was used on earthenwares imported from England during the late nineteenth and early twentieth centuries, our sample has many more American-made examples dating ca. 1910-30 (Plate 5k and probably 5i and l). In our sample, decals appear almost exclusively on whiteware vessels rather than on softpaste or hardpaste porcelain. More comparative work needs to be done with this decorative method, since changing decal styles might prove to be useful horizon markers. We suspect that decal-decorated ceramics will be found in some quantity in most nineteenth- and twentieth-century deposits.

Edge Decoration

Wares referred to commonly as "edge decorated" in the literature (Lofstrom *et al.* 1982; Miller 1973, 1980; Price 1979) are subsumed under the raised/handpainted and raised/nonpainted categories.

Handpainted

The raised/handpainted category includes shell and other embossed (cf. Lofstrom *et al.* 1982:9; Noël Hume 1970:131) edge-decorated vessels with single color bands applied over the raised design around the rim. Decoration usually is restricted to the vessel rim area, though rare examples have been reported with additional handpainting in the center (Noël Hume 1969a:393, 396; 1970:130-33). Also included in this category are vessels that have (a) raised lip ridges or panels, ribs, floral motifs, etc. around the rim border area and occasionally around the vessel midline or pedestal as well, and (b) painting on the rim (e.g., a border stripe) or directly below it.

Edge-decorated pearlware and creamware vessels with enamel borders were produced in England and exported to America by the 1780s (Noël Hume 1969b:922). Creamware with the raised "feather-edge"

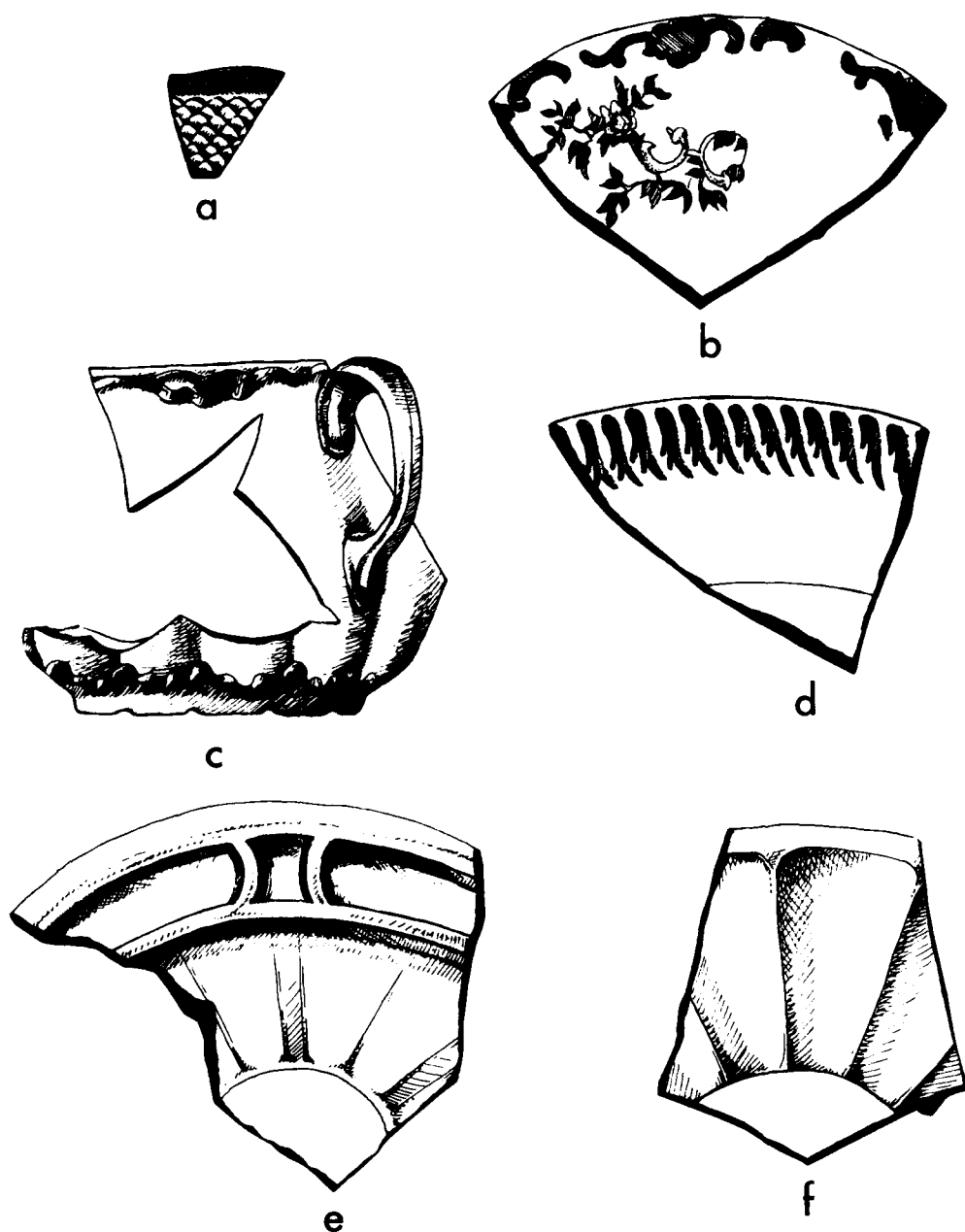


Figure 21. Examples of vessels with raised or molded edge decoration: a, plate rim, blue cord and fish-scale edge, interior, pearlware, Smith-Gosney 4; b, shallow bowl/saucer, abstract edge, gold and green with floral decal below in yellow, pink, and green (close-up of raised edge appears in Plate 4h), whiteware (vessel has transfer-printed John Edwards Co. mark [see Plate 8k], dates ca. 1880-1900), Smith-Gosney 49; c, cup, abstract edge with gold trim around lip and notched pedestal, molded vessel shape, exterior, whiteware, Smith-Gosney 54; d, plate rim, unpainted shell edge, interior, whiteware, Smith-Gosney 5; e, saucer, molded horizontal border panels and molded vessel shape, interior, ironstone (vessel has transfer-printed T. J. and J. Mayer mark [see Plate 8j], dates ca. 1850), Smith-Gosney 30; f, saucer, molded broad-fluted vertical edge with scallops, interior, ironstone (vessel has transfer-printed unidentified British backmark), Smith-Gosney 32. Sherds are illustrated at a 30% reduction.

motif often is mistakenly called "shell edge" (Noël Hume 1970:131), though the latter was by far the most popular ware of the two. Press-molded, shell-edged decoration was being produced as early as 1780 on pearlware (Lofstrom *et al.* 1982:7), and it continued to be popular after the combination of whiteware paste and leadfree glaze became widespread ca. 1830. Colors used to decorate the edge motifs include blue, green, brown, purple, and pink, though blue was the most popular color, with green a somewhat distant second. The other colors apparently were rarely used (Lofstrom *et al.* 1982:7; Noël Hume 1969a:394).

Noël Hume (1969a:392) notes that "of the tens of thousands of shell-edge fragments excavated in Williamsburg [late 1700s-early 1800s], . . . [all] are blue and green shell-edge pearlware." Blue and green also are the only colors present in the assemblages from the five Cannon sites. However, Price (1979:17) reports one pink sherd from a mid-nineteenth-century farmstead in the Western Lowlands of southeast Missouri.

It probably is more than coincidental that the most popular color used in shell-edge decoration was the relatively dark cobalt blue, also the first color to be popular in underglaze transfer printing. The rarer colors reported above (e.g., brown, purple, and pink) could have been used only as overglaze decoration on edged wares until around 1830, when lead-free glazes were developed. Our guess is that by the time it was feasible to use the rarer colors under the glaze, blue and green had become the dominant colors for shell-edge wares. The rarer colors then became the colors of choice on underglaze transfer-printed wares, beginning around 1830.

Shell-edge and similar embossed-edge decorative techniques were produced until approximately 1860, though they appear occasionally in the archaeological record after that time (e.g., in the 1876-83 levels at the Custer Road Military Dump [Brose 1967:59, 69]). No vessels of this type are present in the assemblage from the Mappin-Vaughn site, which dates from ca. 1865-90. Miller (1973:9; 1980:10) notes that changes in production technology allowed the price of edgewares to fall until eventually (ca. 1850-60) they were even less expensive than undecorated wares, and the market for them bottomed out.

We find it useful to give the shell-edge and similar edge-decorated techniques a general production range of 1780-1860. However, Lofstrom *et al.* (1982:7, 14) subdivide this range based on whether the technique is used on pearlware or on whiteware: shell-edge blue pearlware, 1780-1830; shell-edge green pearlware, 1800-30; embossed-edge blue and green pearlware 1800-30; and shell-edge and embossed-edge blue whiteware 1830-60. We have several examples of green shell-edge and embossed-edge decoration on what we are confident is white-

ware, though Lofstrom *et al.* (1982:10) note they never have seen green on any ware other than pearlware. The long span of popularity for this decorative technique, regardless of the ware type on which it occurs, lends further credence to the use of type of decoration over ware type as a meaningful tool for categorizing nineteenth-century ceramics.

Admittedly, it would be useful to be able to distinguish early and late examples of the decorative technique, and ware, if it can be assessed accurately by the researcher, might offer a means to accomplish this. Green shell-edge decoration appears on whitewares as well as on pearlwares in a portion of the Mappin-Murphy assemblage that came from a sealed context securely dated to ca. 1830-40. Thus it is apparent that green was used to decorate whitewares at least until 1840, if not later, as suggested by its appearance on shell-edge and other raised/embossed-edge wares from post-1840 contexts in Cannon. Patterns other than shell edge used on raised/embossed-edge vessels from the Cannon sites include cord with vertical herringbone (Plate 3g), fish scale (Figure 21a), scroll and frond, dot and plume (Plate 3f), and cord and hanging fern/tassel (Plate 3i, l). Price (1979:17 and plates 1 and 2) reports many of the same patterns from southeast Missouri, and we have used her terminology to facilitate comparison.

Shell-edge decoration also occurs without a painted border and is included in our raised/nonpainted category. These unpainted examples from the Cannon sites invariably have a regular-circular lip form, as do most of the raised/embossed-edge vessels mentioned above. Shell-edge vessels, on the other hand, tend to have a scalloped-circular lip form.

Although shell-edge and other raised/embossed-edge decoration appears on a variety of vessel forms (cf. Noël Hume 1970:131), plates and platters are the only forms present in our sample. Price (1979:18) reports the same phenomenon in the southeast Missouri collections she analyzed. Miller (1973:7 [cf. Godden 1966:xxi]) notes that blue-edge ware was sold in sets by at least 1812, though probably not all pieces of the sets were decorated. Cups, for example, rarely were decorated with an edge motif.

Miller (1980:4) classifies shell-edge and raised/embossed-edge plates as "the cheapest ceramics available with decoration," along with sponge decorated, banded, mocha and "common cable" (finger-trailed slip). The color along the edge could be applied by a minimally skilled worker, since all that was involved was a series of short brush strokes along the rim. Miller (1980:4) notes that during the 1840s and 1850s the color was applied as a band parallel to the rim, with the raised edge below lending effect to the design (cf. Noël Hume 1969a:393). The ceramic sample from Mappin-Murphy indicates that this technique began as early as 1830-40 and was

contemporary with the more carefully applied edge variant (compare examples in Plate 3b, h).

The shell-edge and embossed categories form more internally consistent groups than do the other decorative categories included under raised/handpainted, which are discussed below. However, even though the latter categories are quite variable internally, many contain potentially useful horizon markers. Examples in these categories combine molded lip, rim, and body exterior motifs with handpainting on or around the motif, and often are quite elaborate. Handpainting appears as highlighting on edge motifs, as lip-edge accents, and as slip-glaze shading in pastel and metallic colors. In some cases decal floral designs also were used. Raised designs occur as press-molded motifs or ridges around the rim, or as separately molded low reliefs applied to the surface of the piece with slip. Frequently, the raised motifs are accented with gilding, applied either by the liquid gold method or the bright burnished gold method.

The liquid gold method, based on the use of sulphurous oils to dissolve gold or to retain it in suspension, produces an extremely brilliant gilt that unfortunately is not wear resistant. Although the method was in use by 1830 at Dresden, it was not until 1855 that it came into common use in England to decorate inexpensive bone china and earthenware (Hughes and Hughes 1968a:83). A second type of gilding, referred to as bright burnished gold or brown gold, was invented in 1853 but was rarely used until the late 1860s. A thin paste of gold chloride, bismuth oxide, borax, and gum water was applied by pencil brush. The surface appears dull after firing, and is then burnished and cleaned with vinegar to produce a brilliant gold color unique to this method (Hughes and Hughes 1968a:83; Mankowitz and Haggart 1957:95).

There are other types of gilding (cf. Hughes and Hughes 1968a:82-83), but the two techniques discussed above appear to be the ones used most frequently on relatively inexpensive earthenwares dating post-1850. The presence of gilding, therefore, is a useful temporal guide, though it often is impermanent, especially when applied over the glaze as in the liquid gold method. Archaeological examples tend to have only traces of the gilding remaining.

Softpaste porcelain, whiteware, and ironstone vessels exhibiting the elaborate decorative techniques discussed above appear infrequently after 1840 at all Cannon sites except for Mappin-Vaughn, which dates ca. 1865-1895. In light of the small number of sherds of any class recovered from Mappin-Vaughn, compared to the total from the other four sites, the absence of gilded examples is not surprising. Figures 21b and 21c illustrate several examples of gilded vessels, which include a variety of forms such as plates, cups, saucers, and bowls. Such vessels probably were purchased in sets.

In summary, although the combinations of decora-

tive attributes discussed in this section do not form cohesive classes, examination of them offers insights into the development of nineteenth-century ceramic styles, which is a chronicle of changing methods and ceramic mediums. It appears that when the heavy grayish-white ironstones were introduced ca. 1850 (Lofstrom *et al.* 1982:10), some varieties were elaborately decorated. For example, "Gaudy Ironstone" was produced between 1855 and 1865 and is characterized as a "heavy ware that is a mixture of pottery and porcelain clay, blue under the glaze, other colors on top, with or without lustre" (Ray 1974:77) (see Plate 4l).

Nonpainted

Few researchers have examined the nonpainted embossed-edge category in depth. Lofstrom *et al.* (1982:10) group vessels that are "embellished with molded geometric, foliate or floral motifs" with undecorated whitewares. We believe, however, that earthenware and porcelain vessels decorated in this manner are distinct enough to be grouped into a category of their own, and as such, their temporal significance is much easier to assess.

The most common decorative motifs found in this category are molded, raised, thick- and/or thin-line floral designs, including vines, fronds, and leaves, often in combination with molded lip ridges and/or bosses. Vessels with these motifs are entirely free of painting and transfer printing and occur in a wide variety of tableware forms.

This category appears in the archaeological record ca. 1840 (e.g., at Fort Renville, Minnesota [Lofstrom *et al.* 1982:10] and in the Ozark border region [Price 1979:22]). Elaborately molded, unpainted forms were popular in heavy ironstone between 1850 and 1860. Some motifs are similar to earlier press-molded edge decoration, but they are unpainted (see Figure 21d). By approximately 1880 the heavy ironstones generally were left completely undecorated, while thinner earthenwares (ironstone and whiteware) were decorated with more subdued raised motifs. A series of drawings, primarily of vessels excavated at the Smith-Gosney and Harvel Jordan sites, illustrates the development of this decorative method as seen from the perspective of the archaeological record. Pieces that date as early as ca. 1850 exhibit press molding over large portions of the vessels (see figures 21e-f, 22a). Other pieces exhibit molded low reliefs, alone or in combination with press-molded low ridges and/or motifs, usually applied close to the rim (compare examples in Figure 22b-d).

By 1880, relief decoration tended to be more delicate. A porcelain bowl from Smith-Gosney that exhibits an abstract floral and boss motif over the entire vessel interior (Figure 23a) probably dates to that period. Two

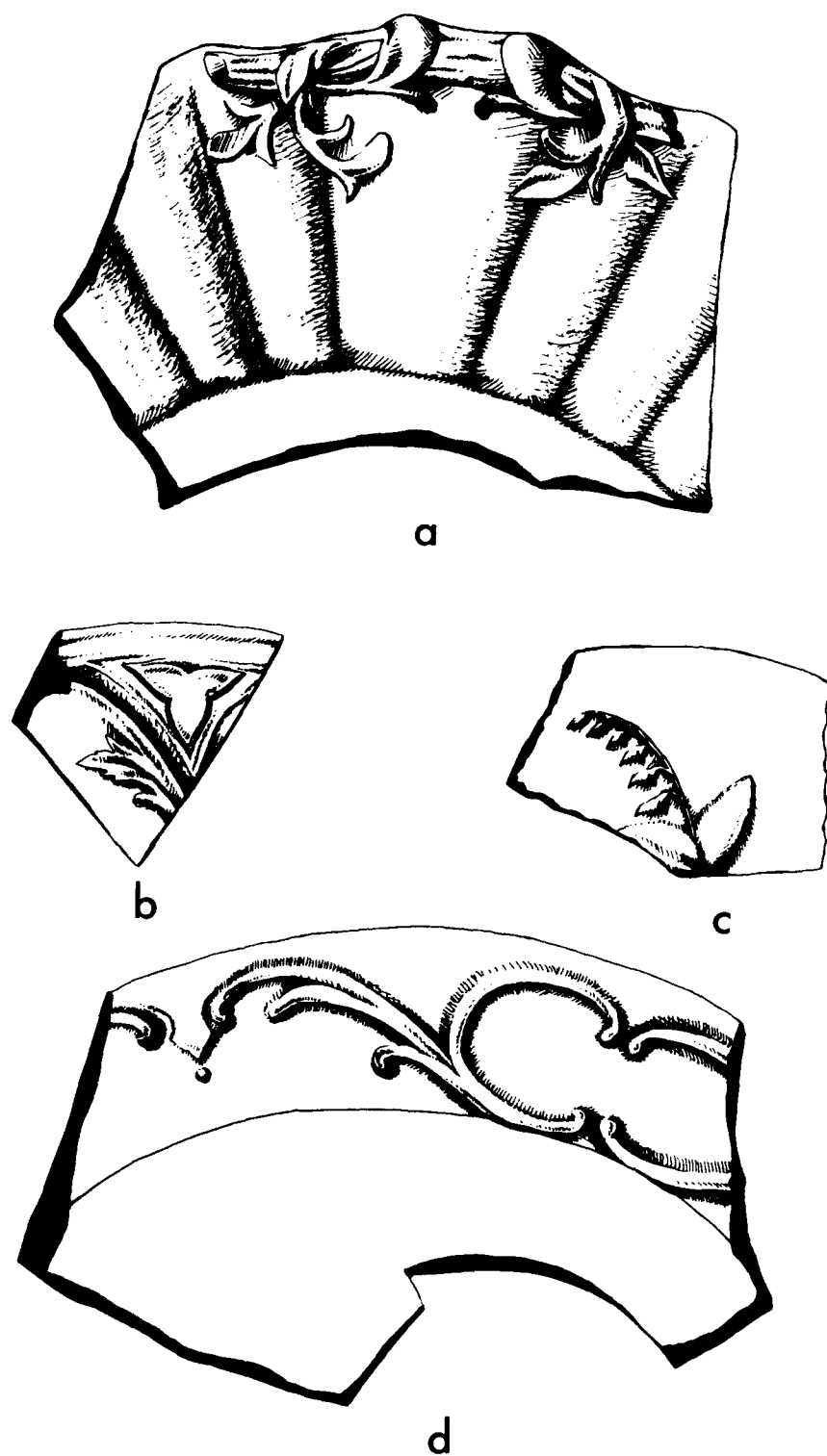


Figure 22. Examples of vessels with raised and/or molded decoration, dating ca. 1850-80: a, platter, molded vessel shape with molded applied decoration and floral edge, interior, softpaste porcelain, Smith-Gosney 28/29; b, saucer rim, floral edge, interior, ironstone, Smith-Gosney 39; c, saucer rim, floral edge, interior, ironstone, Smith-Gosney 35; d, plate rim, floral edge, interior, ironstone, Smith-Gosney 13. Sherds are illustrated at a 25% reduction.

pieces dating between 1880 and 1890 (Figure 23b-c) illustrate the more finely executed floral and abstract motifs that occur on matched sets made of thinner whitewares and ironstones.

This floral/foliate style may have been influenced in a general sense by the Art Nouveau movement in England that existed between ca. 1880 and ca. 1905. The style "abandons the straight line in favor of the curve" (Garner 1978:17) and features sinuous and interlacing lines, derived from natural (usually vegetal) forms (Harling 1973:31-32).

From 1870 until the 1920s, American and British factories competed for markets for white earthenwares (Ketchum 1983:12). Undecorated vessels and those with raised designs were very popular, and after about 1860 they more or less eclipsed handpainted wares.

In the early twentieth century, whiteware production in America continued to expand. Some manufacturers continued to borrow from traditional styles such as those inspired by the British interpretation of the Art Nouveau movement, while others adapted styles from contemporary design movements such as Art Deco (Ketchum 1983:12). The Art Deco style (ca. 1905-1935) is characterized by its emphasis on rectangularity. During that time it was primarily a continental European and American style and began to appear in Britain only ca. 1928, when it was already declining elsewhere (Harling 1973:30-31).

We have characterized a group of ceramics from Harvel Jordan as Art Deco. The decoration usually appears as raised repeating border motifs in rectilinear abstract shapes on various earthenware and porcelain vessel forms, often as parts of matched sets (Plate 6c). Some examples may exhibit a controlled curvilinear effect, as that in Plate 6d. In the examples we examined, designs tend to be restricted to the lip/rim border area.

Nonraised/Handpainted

Floral

By far the most common decorative motif found on handpainted ceramics from the five Cannon sites is some type of floral design. Unfortunately, most literature on nineteenth-century ceramics fails to treat adequately the decorative variability among handpainted wares dating post-1830. Lofstrom *et al.* (1982:6) claim that handpainted decoration is less common on whiteware than on pearlware, and that most floral decoration on whiteware is of a type referred to as "sprig pattern." However, at the Cannon sites handpainted vessels with floral decoration are abundant. Percentages of floral-decorated vessels range from 7% at Mappin-Vaughn to 26% at Samuel H. Smith. In those assemblages there are several clearcut varieties besides the "sprig" pattern.

For ease of identification we first characterize

handpainted floral decoration according to how the motif was applied: thin line, thick line, or a combination of the two. Floral decoration often was applied either free-hand with a small brush or by stencil. In some cases we identify a previously defined decorative style or pattern, such as "broadline/peasant" style (Bembroz 1952:9; Lofstrom 1976:27; Lofstrom *et al.* 1982:9; Price 1979:20) and "tea leaf luster" (Ray 1974:221-22).

The broadline/peasant style is characterized by stylized floral motifs done in broad brush strokes that cover most of a vessel surface. Pearlwares decorated in this style date as early as 1810. Colors used include monochrome cobalt blue and earthen-tone polychromes such as brownish green, tan, earthen orange, and yellow (Lofstrom *et al.* 1982:6). These same colors continued to be used on whitewares between 1840 and 1860, along with the bright polychrome palette that included bold blacks, greens, reds, blues, and pinks, in addition to the earthen colors. An example of brown and pink broadline decoration on whiteware occurred in the ca. 1828-40 context at Mappin-Murphy. Other colors used for broadline decoration on vessels from Cannon sites include rust, yellow, pink, metallic pink, dark and light green, medium and dark blue, red, and black. Several examples of this style are illustrated in plates 5d, h and 6a.

Sprig decoration consists of small floral elements scattered over a plain background. A typical motif is composed of a black hairline stem with small green leaves and stylized red and blue flowers or berries (Lofstrom 1976:27; Lofstrom *et al.* 1982:9; Price 1979:20). In contrast to the broadline style, sprig decoration leaves large portions of a vessel undecorated. For example, a cup may have only two or three repeating motifs on the exterior and one in the cupwell, while a plate may have repeating motifs around the rim border (compare Plate 5c and e). Examples from Cannon sites exhibit the same range of colors as vessels decorated in broadline style, except that no monochrome blue sprig decoration occurs. All sprig and broadline painting is done underglaze. However, it is interesting that the red, blue, and earthen yellow colors used to create these motifs are identical to the colors used as accent handpainting on transfer prints from 1840-50 (Lofstrom *et al.* 1982:9).

All vessels decorated in the sprig or broadline-floral style from Cannon sites almost always occur as parts of tea sets (e.g., cups, saucers, and pitchers) rather than as dinner sets. Price (1979:21) notes the occurrence of bowls and a possible bottle decorated in broadline style in her sample from the southeast Ozark border area of Missouri, and we encountered an example of a green, blue, and black sprig plate at Mappin-Murphy. The lip form of these vessels generally is regular-circular. Based on data from the five Cannon sites, a peak popularity period for the broadline and sprig style of handpainting

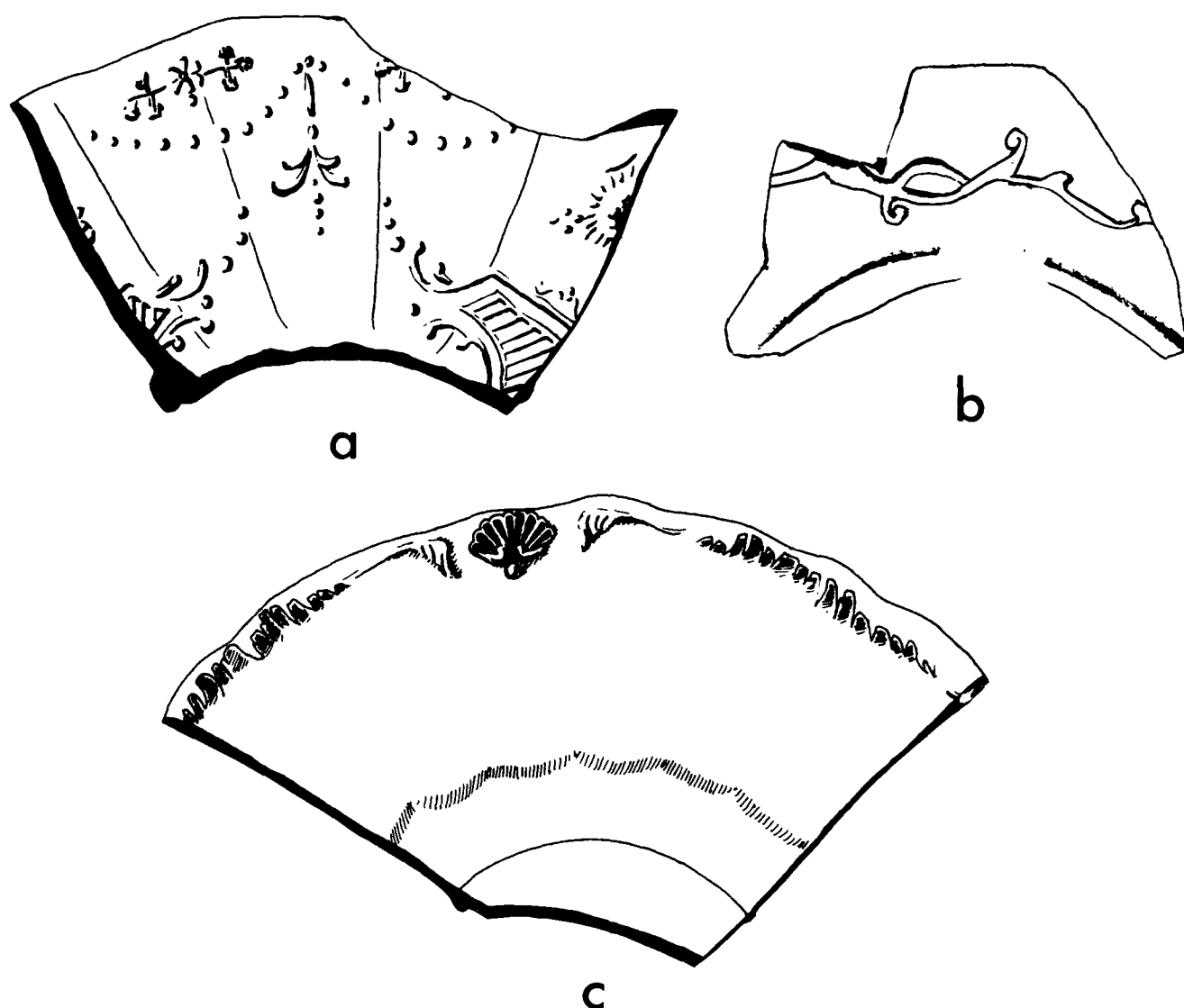


Figure 23. Examples of vessels with raised decoration, dating to the late nineteenth century: a, bowl, raised bosses and abstract floral over vessel interior, hardpaste porcelain, Smith-Gosney 37; b, shallow bowl, floral design above pedestal, exterior, ironstone (part of matched set, saucer has transfer-printed Alfred Meakin [Ltd.] mark [see Plate 8c], dates post-1897), Mappin-Vaughn 16; c, saucer, shell and wave edge, interior, whiteware/thin ironstone (vessel has transfer-printed J. and G. Meakin mark [see Plate 8h], dates post-1880), Smith-Gosney 31. Sherds are illustrated at full scale.

is 1840-60, though these styles were manufactured as early as the 1830s. Miller (1980:4) places the prices of simple painted wares exhibiting flowers, leaves, stylized Chinese landscapes or geometric patterns above shell edge, sponge decorated, and mocha, but below transfer-printed wares, since the painters had to be skillful enough to duplicate patterns on pieces for matched sets.

Earthenwares decorated with sprig and peasant motifs rarely are marked. Even so, we are confident that most, if not all, examples are of British origin. These decorative styles probably are ubiquitous at mid-nineteenth-century midwestern sites, since identical ex-

amples appear at such widely separated sites as Fort Renville, Minnesota, the Cannon sites in northeast Missouri, and sites in the Ozark border region of southeast Missouri. American earthenwares available at that time, such as yellow ware, Rockingham, and a small amount of whiteware (cf. Ketchum 1983:11-12) were not being produced on the same scale as the British wares, nor were they being marketed as efficiently.

The identification of sprig or broadline-floral decoration on a vessel is relatively simple once a researcher has seen a few examples. However, much of what is characterized as thick-line and/or thin-line handpainting in the

assemblage summaries in this study is not identifiable as to a particular style. Thin-line floral elements, such as flower stems or floral outline shapes, appear to have been painted by using the tip of a very fine brush. Thick-line floral designs probably were produced by using broader brush strokes or stencils, so that leaves and petals could be applied uniformly to give a solid, filled-in look to each element. Frequently, the two types of decoration were combined on a vessel also having handpainted border stripes (see Plate 5f for an example of softpaste porcelain). A wide variety of colors was used to decorate these vessels, including the same dark flow blue (Plate 4j) used on transfer prints ca. 1840-60.

Rather crudely applied handpainted decoration, such as that discussed above, in general was popular from 1840 to 1860 (and probably even later). Colors varied and were used both monochromatically and in polychrome combinations. By 1850 whitewares and inexpensive softpaste porcelains were the most common medium for handpainted floral expression. On softpaste porcelain handpainting often occurs in a "layered" fashion. Colors were applied both under and over the glaze to create a textured effect (Plate 5g). This type of decoration is easy to identify, since the underglaze color appears sharp and well defined, while the overglaze color generally will be partially worn away and/or discolored. Underglaze/overglaze painting is not mentioned elsewhere in the literature but appears to date ca. 1830-60. This type of decoration occurs on various vessel forms having regular-circular and scalloped-circular lip forms, and often appears on dinner sets.

According to Ray (1974:221), undecorated ironstones were introduced around 1850, but from approximately 1880 to 1900 the simply executed tea-leaf luster motif (called "Lustre Band and Sprig" by the manufacturers) was an extremely popular variety. Introduced in the 1850s, it did not reach peak popularity until much later. The outline of a design was printed on a vessel surface before the piece was glazed and fired, after which the copper or gold luster was applied by hand, covering the design entirely. Thin luster bands often were applied around the vessel borders. Dinner ware and sanitary ware sets in a multitude of different forms were produced for the American market by at least 18 Staffordshire potters, including Thomas Furnival, Alfred Meakin, and Mellor, Taylor and Company. In the United States, Mayer Pottery Company, Beaver Falls, Pennsylvania; Wick China Company, Kittanning, Pennsylvania; and Cartright Bros., East Liverpool, Ohio, were leading producers (Ray 1974:221-22). For an example of a tea-leaf luster cup from Harvel Jordan, see Plate 6b.

Most handpainted motifs on nineteenth-century earthenware have floral rather than abstract or stylized themes. However, we have a few examples with scenic motifs or

abstract designs stenciled or handpainted around the vessel border, and these are categorized as "other" handpainted. Abstract handpainted motifs tend to date post-1850.

Border Lined/Banded

Price (1979:20-21) defines a banded variety of her handpainted whiteware type, based on examples in collections from sites along the eastern Ozark border. This variety includes vessels—mainly cups and saucers—decorated only with a painted band around the rim or with a series of concentric bands encircling the body. Colors include green, red, black, and light and dark blue. She notes that this variety presents a problem, in that many of the vessels grouped in the category are probably rim sherds of vessels, which if found in a more complete state would be classified as handpainted floral. Comparable types in the Cannon assemblages present the same difficulty.

There are, however, examples in which border lining/banding was used as a decorative technique by itself. We use the term "line" to encompass both stripes and bands. Stripes measure less than a centimeter in width and can be either thick or thin (see Plate 4c). Bands have widths greater than or equal to a centimeter. Thick-line and thin-line stripes often were used (beginning ca. 1880?) in conjunction with multicolored decals as border decoration. Single or multiple thick-line and/or thin-line gold stripes around the borders of whiteware vessels that lack other decoration were used to decorate sets containing a wide range of vessel forms. We date the style post-1860, based on the type of gilding (very bright gold). No mention of this particular style was found in the literature, though Jacobs (1983:22) lists gilded and edge-lined *porcelain* from the Butler's Barracks military midden as having popularity ranges of 1815-66 and 1815-1900, respectively. Without further definition it is difficult to determine whether these types are in any way comparable to our gold border-lined whitewares.

Sponge/Spatter

The terms *sponge* and *spatter* decoration often are used interchangeably by collectors and archaeologists, though the literature suggests there may be several temporally distinct variants. Spatter is a decorative technique executed in a multitude of underglaze colors and found primarily on inexpensive earthenwares having a clear alkaline glaze. Although most spatterware is unmarked as to manufacturer, it was produced in great quantities by the Staffordshire potteries throughout the nineteenth century and in the United States after ca.

1850 (Ketchum 1983:177-78). Spatter decoration was applied variously to the border, the center, or the entire surface of a vessel. Ray (1974:211-12) notes that on the earliest pieces, spatter decoration was produced by tapping a brush full of paint against the vessel being decorated, often creating designs through stencils. In 1845 a cut-sponge process was developed, whereby color-filled sponges resembling stars, flowers, angels, eagles, and other forms were used to produce concise decorative motifs. The spatter effect also was produced occasionally by transfer printing (Ketchum 1983:197). Plates and platters are the forms that commonly contain spatter decoration, but the technique also was used on serving dishes, on cups and saucers, and even on coffee pots and pitchers (Ketchum 1983:229).

Ray (1974:211-12) describes a variant of spatterware that she classifies as part of the Pennsylvania Dutch style, dating ca. 1835-85. Cole (1967:89) presents earlier dates (ca. 1820-60) for this style, and characterizes it as earthenware bordered with sponge-applied stippling in red, blue, and green—colors similar to those used on sprig-pattern whitewares. Most vessels in this style also exhibit freehand center designs, the most popular being the peafowl, the schoolhouse, and the tulip and rose patterns, though more than 40 patterns have been listed (Cole 1967:89; Greaser and Greaser 1973). Sets of tableware in these patterns appear to exhibit a wide range of intraset variation.

Price (1979:19) notes that decoration in this style on vessels from sites along the eastern border of the Ozarks usually consists of a wide band or bands of alternating colors around vessel rims. Cups may have interior and exterior spatter decoration. Handpainted designs, such as the bird or floral motifs mentioned above, occur occasionally on spatter-decorated vessels in Price's samples, but only one vessel with handpainted decoration and spatter (multicolored) was found in the Cannon assemblages—that from Harvel Jordan. The range of colors found on spatter-decorated ware from the Cannon sites includes red or pinkish red, green, and light blue (see Plate 5a for a pinkish-red example). Additional colors used on spatter-decorated wares include brown, orange, yellow (Price 1979:19), and black (Ketchum 1983:177).

Ray (1974:211) states that though spatterware was offered for sale all along the Eastern seaboard, it found ready sale only at the port of Philadelphia. She notes that the "thrifty, color-loving Germanic settlers in the Pennsylvania hinterland . . . took it to heart and made it their own." However, spatter decoration appears on small numbers of vessels in the Cannon assemblages and in assemblages from the eastern Ozark border (Price 1979), from Fort Renville, Minnesota (Lofstrom *et al.* 1982), and from several nineteenth-century sites in Nebraska (Steinacher and Carlson 1978). But as noted

above, the Cannon and eastern Ozark border examples generally lack the center freehand decoration characteristic of the Pennsylvania Dutch style. It is possible that the Staffordshire potters produced spatterware devoid of center design motifs for distribution outside the Pennsylvania Dutch country.

Sponge decoration is similar in method of application to spatter decoration, but its effect is somewhat different. Even so, we hesitate to give the impression that it is always easy to distinguish between the two techniques. While spatter decoration tends to be applied in more distinctive, concise patterns, designs that are sponged appear as if they were applied by a sponge or chamois with large interstitial openings, and often sponge decoration is used to cover the entire vessel and appears rather "smudged" (Ketchum 1983:229). In spattering, colors are usually applied as separate and distinct parts of a pattern, while in sponge decoration colors often are applied over one another.

Sponge decoration is found on plates and other types of tableware, as well as on mixing bowls, heavy pots, and other types of kitchenware. It occurs on stoneware and heavy ironstone as well as on white earthenware. Various types of spongeware were made by British and American (especially those in New Jersey and Ohio) potteries from 1860 to 1935 (Ketchum 1983:178, 228-29). Only three spongeware vessels—all deep blue in color—occur in the Cannon assemblages, all belonging to a set found at Harvel Jordan (see Plate 5b). Ketchum (1983:178) illustrates a plate identical to the Cannon examples, which he dates ca. 1860-90. Price (1979) does not report sponge decoration of this type from the eastern Ozark border collections dating from 1810 to 1870 (she terms sponge what we term spatter), which is not surprising since sponge decoration appears to date to later in the nineteenth century than does spatter decoration. Steinacher and Carlson (1978) list examples of sponge-decorated vessels found at several Nebraska sites dating from 1822 through the 1870s, while spatter decoration was found at only one site, dating 1822-41.

Annular/Slip Banded

Annular decoration is a technique used to apply horizontal bands or stripes of colored slip, usually to hollow vessel forms such as mugs, bowls, cups, and covered dishes (Lofstrom *et al.* 1982:7; Price 1979:18; Ray 1974:138). The bands or stripes have slight relief and may even exfoliate, making vessels in this class distinct from those with flat "banded" or "lined" decoration (Lofstrom *et al.* 1982:7). The vessel may be further embellished with one or a combination of the following: engine-turned or rouletted decoration, handpainted swirls, cat's-eye dots, marbled/scrambled motifs, and "mocha" designs.

Engine-turned or rouletted decoration is produced when a diamond-, raised dot-, chevron-, or other-shaped instrument is pressed through a slip into a still-damp vessel as it is turned on a potter's wheel (Lofstrom 1976:28), thereby exposing the contrasting body beneath (Godden 1963:105) (see Plate 4a-b, i). Handpainted motifs used on annular wares as accents between bands or in large open areas of a vessel include swirled designs resembling "finger painting" (see Plate 4b, d, k), and black and white "cat's eyes." In addition, zigzag and other abstract-shaped concentric lines often are applied between bands (see Plate 4e). Sometimes the term "mocha ware" is used synonymously with annular ware, but it actually is a variant of the latter. Mocha, or "dipt" (cf. Van Rensselaer 1966:337), decoration is created when an acidic mixture (consisting of various combinations of tobacco juice, hops, urine, dry printer's black, turpentine, citric acid, and water) is dripped on an area of colored slip, where it spreads into dendritic forms resembling trees, seaweed, fronds, etc. (Price 1979:18; Ray 1974:180; Van Rensselaer 1966:337) (see Plate 4a).

Vessels with annular decoration are variously referred to as "banded creamware," "mocha," "dipt/dipped," (Van Rensselaer 1966:337) and slip banded (Price 1979:18). Annular decoration may have been used on early creamwares, but the term "banded creamware" probably should be used in a more generic sense to refer to buff-colored- or cream-colored-paste earthenwares. Annular decoration was a common technique used on pearlwares from ca. 1790 to 1820/1830 (Lofstrom *et al.* 1982:8; South 1977:212) and on whitewares from ca. 1830 to 1860 (Lofstrom *et al.* 1982:10). On both pearlwares and whitewares annular decoration may have had a bimodal (Lofstrom *et al.* 1982:10) or overlapping temporal distribution. Lofstrom (1976:34) reports that 7 pearlware and 2 whiteware annular-decorated bowls were found with 11 handpainted "sprig-pattern" whiteware cups and one saucer in the Ft. Snelling sutler's store, in a context dating ca. 1840-60. We view annular-decorated ware as a decorative form that simply had a long popularity span (60 to 70 years), independent of the purported shift from pearlware to whiteware.

Price (1979:18) notes that early annular-decorated ceramics have narrow bands or stripes, and that many colors and decorative motifs are used on each vessel. Colors include earthen blues, greens, browns, yellows, and black. Later annular decoration tends to be characterized by wider bands of bright background colors (e.g., bold blue, yellow, and white) upon which very narrow white or black bands were placed (compare Plate 4b and g with Plate 4i).

Annular-decorated vessels appear in four of the five Cannon assemblages, the exception being that from Mappin-Vaughn. The examples from the pre-1840 con-

text at Mappin-Murphy seem to fit well into Price's earlier category, with their "busier" combinations of earthen-tone painting and swirled decoration (see Plate 4b and k). Cups and bowls are the most common vessel forms in the Cannon assemblages.

Most annular-decorated earthenware was produced in England as an inexpensive utilitarian ware for local use and for export (Van Rensselaer 1966:338). Ray (1974:131) notes that many potters made "mocha" ware from the late 1790s until 1914. After 1840, however, vessels in this decorative style were heavier, had a white paste rather than a cream-colored paste, and had round instead of strap handles. Although the Cannon examples probably are of English origin, some annular wares were produced in the United States by ca. 1850 (e.g., by Edwin Bennett, Baltimore, Maryland) (Ray 1974:138). Miller (1980:3-4) places "banded and mocha" in his next-to-lowest-price category, classifying its decoration as "minimal . . . produced by minimally skilled operatives." There usually is a wide range in decoration on vessels of similar size and form.

Slip Glazed

Slip glazing is a decorative technique in which a vessel surface is completely or almost completely covered with a colored glaze. Small numbers of slip-glazed redware-paste, buff-paste, and yellow ware-paste vessels occur in the Cannon assemblages. A piece of milk glass that has a lightly enameled surface, from Harvel Jordan, was included in this category. Identifiable forms from the Cannon assemblages include vases, bowls, and possibly a cup. Ketchum (1971:96) notes that slip glazes also were used frequently on ornamental or decorative pieces such as doorstops and candlesticks.

The Rockingham slip-glaze finish was an important decorative type during the nineteenth century. It was produced by spattering or dripping a rich tan to dark brown, usually manganese-based, glaze onto a revolving piece of white-paste, buff-paste, or yellow-paste ware. The glaze would run and streak over the light-colored body, creating a mottled or swirled tortoise shell appearance (Gates and Ormerod 1982:7; Ketchum 1983:20). Although the tortoise shell finish is the best known variety of Rockingham, New England redware potteries often advertised earthenware with a brown manganese coating as Rockingham (Ketchum 1971:96).

British-made Rockingham in a wide variety of tints dates to 1790 and after (cf. Hughes and Hughes 1968a:130-31). Its American counterpart generally is of the dark brown to mottled tortoise shell variety, and was produced ca. 1825-1900 throughout the country, notably in New England (Cole 1967:81) and in the East Liverpool District of Ohio and West Virginia (Gates and Ormerod 1982:1, 5). Ketchum (1971:97) notes that

Rockingham-style wares still are produced by several major potteries.

From ca. 1850 to the early 1870s, East Liverpool manufacturers confined themselves to yellow ware and Rockingham production, basing their industry on the easily obtainable clays of the upper Ohio River valley, which, after firing, appear buff to yellow in color. Both Rockingham and yellow ware were grouped under the term "Liverpool" ware and the trade name "Queensware" during the mid-nineteenth century (Gates and Ormerod 1982:5, 7). "Queensware" should not be confused with "Queen's Ware," the name given to the creamware perfected by Wedgwood in the 1750s, when Queen Charlotte ordered a complete dinner set of the ware (Ray 1974:180). A set (?) of Queensware was listed in the probate records of Samuel Smith's estate in 1876, and almost certainly refers to yellow ware or to Rockingham.

Miscellaneous slip-glazed pieces in the Cannon assemblages include a Fiesta-like enameled vase with an opaque green glaze and a vase and cup (?) with flow blue, mottled exteriors that have metallic sheens.

No Decoration Except Body Molding

In this category we include vessels that are devoid of decoration except for a molded vessel shape. Molded vessel shapes *do* occur in conjunction with other decorative techniques such as transfer printing or handpainting. However, the presence of molding-only may be temporally significant, and thus we separated vessels with molding-only from molded vessels containing other decoration. Vertically fluted, paneled, and ribbed vessel shapes are produced by press molding. This technique was used throughout the nineteenth century on porcelain and earthenware, but it became popular in ironstone after mid-century. Various vessel forms were decorated in this fashion, from cups, saucers, and plates to serving pieces.

Undecorated

Undecorated, or "plain," vessels form a small but

nonetheless distinct class—where the lack of applied decoration is in effect a decorative statement. Undecorated vessels were encountered in each Cannon assemblage and include pieces of yellow ware, whiteware, ironstone, and softpaste porcelain. Intra-assemblage percentages of undecorated vessels range from lows of 4% at Harvel Jordan, 5% at Mappin-Murphy (pre-1840 component), and 7% at Samuel Smith, to highs of 17% at Mappin-Murphy (outside the pre-1840 sealed context), 20% at Smith-Gosney, and 27% at Mappin-Vaughn. These percentages are based on somewhat conservative vessel counts for undecorated wares. The reason for a conservative approach is that decorated sherds are matched more easily into whole vessels than are undecorated sherds. Unless undecorated rim and body fragments fit together, it often is difficult to distinguish whether a sherd is from an undecorated vessel or from that portion of a decorated vessel not covered by the design.

Whiteware and softpaste porcelain vessels occasionally lack decoration, and yellow ware and ironstone vessels commonly appear in an undecorated state—yellow ware in a variety of utilitarian forms and ironstone primarily as tableware vessels such as cups and saucers, plates, and serving pieces. Large quantities of yellow ware were produced in the midwestern and eastern United States from ca. 1830 to 1940 (Ketchum 1983:11-12). British-made ironstones—thick, heavy, hardpaste earthenwares exhibiting a cold, grayish color—appear in ceramic assemblages from the Midwest that date ca. 1850 (Lofstrom *et al.* 1982:8). From 1870 to the 1920s, factories in New York, New Jersey, Ohio, and Maryland manufactured vast quantities of ironstone, much of it in imitation of its British counterpart (Ketchum 1983:12). Ketchum (1971:122) notes that American ironstone products have always suffered from a form of ceramic colonialism. Data from the Cannon assemblages appear to substantiate this assertion, as all undecorated ironstone vessels with identifiable backmarks were made in Britain. Cannon manufacturers' marks include those of Alfred Meakin and J. and G. Meakin, with some examples of Furnivals and Challinor.

SUMMARIES OF THE EXCAVATED ASSEMBLAGES

Assessments of the ceramic assemblages from the five excavated sites provide a basis for constructing temporal and cultural generalizations about the sites and their inhabitants. In this chapter we summarize the assemblage from each site and include information in tabular form on (a) the frequencies and percentages of vessels by decorative class, (b) the quantities and variety of sets discernible in the assemblages, and (c) backmarks. Detailed information on the vessels from each site is presented in Appendix I.¹

As discussed in Chapter 1, all but two assemblages—that from the pre-1840 sealed deposit at Mappin-Murphy and that from Mappin-Vaughn—cover long spans of time. Nonetheless, a consideration of the assemblages in terms of the decorative categories stressed here allows one to develop a feel for the temporal variability represented. The dates obtained by identifying various backmarks can aid in constructing tentative boundaries for site components that then can be compared to actual dates of occupation as reconstructed from documentary sources.

The summaries emphasize decorative aspects of the ceramic assemblages rather than the formal or distributional aspects. Although the latter perspective (i.e., where on a site sherds were found) can provide important information in some analyses, the nature of the deposits and the restricted areas of excavation preclude studies based primarily upon sherd distribution. We recognize the potential utility of formal analyses by rim or handle shapes (see Cushion 1976; Price 1979), but for our purposes this would have added unnecessary confusion to the classificatory scheme. We believe it is more important to develop a consistent, easily applied scheme based upon straightforward decorative attributes. For ease of comparison we use common descriptive terms for vessel forms (e.g., cup, saucer, plate, bowl, sugar bowl, wash pitcher, etc.), rather than more detailed composite terms that employ dimensions such as vessel diameter (cf. Miller 1980). Some forms are not easily identifiable and are simply labeled with a general descrip-

tive term, such as "cylindrical vessel."

The variety of forms present throughout the nineteenth century at the Cannon sites remained fairly constant. Some classes of decorative attributes tended to appear in a limited range of forms, such as shell-edge plates and platters, or handpainted cups and saucers with sprig floral decoration, while other decorative techniques such as transfer printing were used to decorate entire dinner sets. It appears that the number of sets owned by site inhabitants increased through time, though this may have had more to do with availability than with individual preferences.

By analyzing the types of ceramics available as sets as opposed to those that are not, one can gain information on the availability of, and variability among, certain decorative classes of ceramics, as well as on the changing purchasing and activity patterns of the site inhabitants. Where we discuss sets we mean either (a) dinner sets, consisting of place settings of various-size plates, bowls, saucers, and cups, as well as a variety of serving pieces (platters, bowls, pitchers, tureens, etc.) and miscellaneous pieces (sugar bowls, creamers, butter plates, etc.); or (b) tea sets, which include cups, saucers, and serving pieces (e.g., beverage container, sugar bowl, creamer, and an occasional plate).

The ceramics grouped together as sets represent fairly standard dinner and tea sets. Absent from the assemblages are indications that the sets had miscellaneous or extra pieces. Either the sets available for purchase by the inhabitants consisted of a rather limited range of standard pieces that were offered and purchased *en toto* or, if extra pieces were available in the sets, they may have broken less frequently.

MAPPIN-MURPHY (PRE-1840 DEPOSIT)

Forty-two vessels (from 360 sherds) were found within the pre-1840 sealed component at Mappin-Murphy. The miscellaneous sherds not included in the minimum vessel counts are grouped with those from outside the sealed area (Appendix I). Thirty-two vessels (76%) are of whiteware, 6 (14%) are of softpaste porcelain, 2 (5%) are of pearlware, 1 (2%) is of yellow ware, and 1 (2%) is of hardpaste porcelain.

Only two sets are present (Table 1)—a softpaste porcelain tea set with handpainted underglaze/overglaze

¹Most abbreviations used in the tables and in Appendix I are self-explanatory. A few that are not are *i* (ironstone), *p* (hardpaste porcelain), *rc* (regular circular orifice), *mc* (regular noncircular orifice [oval or polygonal]), *rw* (redware), *sc* (scalloped circular orifice), *snc* (scalloped noncircular orifice), and *sp* (softpaste porcelain).

TABLE 1.
Vessel Form and Decoration by Set in the
Ceramic Assemblage from the
Mappin-Murphy Site

Set	Vessel number	Vessel form	Decoration
<i>Pre-1840 deposit</i>			
a	59 ^a , 86	saucer, cup	nonraised tp, med & lt blue, abstract border & scenic, ww
b	97a, b, 139 ^a	cup, saucer, sugar bowl	nonraised hp floral, oglz-uglz, floral, yellow, sp
<i>Area outside pre-1840 deposit</i>			
a	26, 27	small plates	nonraised tp, cranberry, cherub motif, ww
b	44a, b	plate, saucer	nonraised hp floral, stenciled tn dendritic branch & floral, lt brown w/ gold accent, ww
c	57a-c	plate, saucer, cup	nonraised hp floral, tk & tn ln sprig, green, blue & black, ww
d	55, 87a, b	saucer, cup, saucer	nonraised hp floral, broadline style, rust, yellow, pink & metallic pink, dk & lt green, sp
e	68, 107	saucer, cup	nonraised hp border lined/banded, tn ln border stripes, red, ww

^aAt least portions of these vessels came from areas outside the pre-1840 sealed context.

floral decoration and a blue transfer-printed whiteware dinner set. It is difficult to match various pieces of a transfer-printed set, since the cups and saucers often contain one scenic view or floral motif and the plates another. Often the only way to identify set members is to match border designs.

A single mark (almost certainly British) was present on a vessel from this early component—an unidentified pattern name on a transfer-printed vessel (Table 2 and Plate 7j). The paucity of marks in the assemblage is not surprising. Although transfer-printed vessels frequently were marked with the pattern name during the first quarter of the nineteenth century, actual use of the manufacturer's mark by itself or with the pattern name did not become common until around mid-century.

Summary information (Table 3) on the decorative attributes found on ceramics from the early component at Mappin-Murphy, combined with information on ware, allows us to reconstruct a typical assemblage for the 1830-40 period. Three decorative classes are almost equally popular: Handpainted vessels account for 33% of the assemblage, transfer-printed vessels for 31%, and

edge-decorated vessels for 28%. Most handpainted vessels (26%) have floral decoration, primarily done in the broadline, sprig, and thick-line and/or thick-and-thin-line styles on whiteware. There also are several examples of underglaze/overglaze floral decoration on softpaste porcelain. Vessels with annular/slip-banded decoration represent 7% of the assemblage (Plate 4b, k). Cranberry is by far the most popular transfer-printed color (21%), with purple and two shades of blue accounting for significantly smaller proportions (5% each). Shell-edge vessels in green and blue account for 14% of the assemblage (Plate 3b-c, k); similarly executed embossed edge-painted and unpainted designs, such as the dot and plume and cord and hanging fern/tassel (Plate 3f, i), represent an equal amount. The single hardpaste porcelain vessel has no decoration except body molding.

One obvious characteristic of this early assemblage is the paucity of undecorated vessels. Only two (5%) occur, one each in thick whiteware and yellow ware. Notable for its absence in the assemblage is any type of decorated or undecorated ironstone. The occurrence of only two pearlware vessels indicates the pearlware to whiteware transition had occurred more or less completely by ca. 1830.

In summary, the pre-1840 assemblage at Mappin-Murphy is characterized by almost equal proportions of whitewares with handpainted floral decoration, transfer-printed decoration, and edge decoration. Softpaste porcelain vessels with underglaze/overglaze handpainted floral decoration account for 9% of the assemblage. Even at this early date a wide variety of ceramic classes was used by the occupants of the Mappin-Murphy site. Very few, if any, vessels found at the site were of American origin. The exceptions may be the one yellow ware example and the stoneware (not discussed here). This indicates that British ceramic goods were available in large quantities to early colonists of the Salt River valley, and that they were well received.

MAPPIN-MURPHY **(OUTSIDE THE PRE-1840 DEPOSIT)**

One hundred thirty-seven vessels were recognized from 566 sherds found outside the pre-1840 deposit at Mappin-Murphy (not including 1105 miscellaneous small sherds from both deposits [Appendix I]). Ninety-five vessels (69%) are of whiteware, 21 (15%) are of ironstone, 12 (9%) are of softpaste porcelain, and 5 (4%) are of pearlware. Minor types include 1 Rockingham vessel, 2 yellow ware vessels, and 1 redware vessel. The number of ironstone vessels might be slightly under-represented because of the large number of undecorated miscellaneous sherds that were difficult to match into whole vessels.

TABLE 2.
Summary of Backmarks in the Ceramic Assemblage
from the Mappin-Murphy Site

Catalog number	Vessel description	Backmark description	Manufacturer and dates of company	Remarks
<i>Pre-1840 deposit</i>				
152	ww plate	tp, cranberry, outline of building w/columns, indet pattern & company (?) name	unidentified	see Plate 7j
<i>Area outside pre-1840 deposit</i>				
26	ww, small plate	hp, cranberry, 13	unidentified	not photographed
53	ww, small dish	tp, black, incomp coat of arms w/. . .INA above & partial letter (N?) followed by period below	probably Alfred Meakin (Ltd.), Royal Albert, Victoria & Highgate potteries, Tunstall, 1873/75- (Godden 1964: 425-26; 1972: 142)	Alfred Meakin marks often had periods after the words "Meakin" & "England"; mark dates between 1891-97 (Godden 1972:257); not photographed; very similar to mark on vessel 10 from Smith-Gosney (Plate 8b)
54	sp bowl	hp, pink, 203	unidentified	not photographed
59	ww saucer	traces of impressed mark & hp blue star-shaped mark	unidentified	not photographed
65	ww saucer	tp or stamped, green, incomp crown motif w/. . . C.P.C° below	probably Crown Pottery Co., Evansville, Ind., ca. 1891-1905 (Ketchum 1971:165; Thorne 1947: 124)	see Plate 7i
96	i cup	impressed, . . .BEST w/ impressed indet mark over the "B"	unidentified	not photographed
115	i oval serving bowl	tp, black, coat of arms/ IRONSTONE CHINA/ . . .G. MEAKIN	J. & G. Meakin, Hanley, Cobridge & Burslem, 1852-90 (Godden 1972: 75)	1880- (Godden 1972:257); see Plate 8f
119	ww serving bowl	stamped, dk green, W.S. GEOR. . ./961A	W.S. George, East Palestine, Ohio, and Canonsburg and Kittanning, Pa., ca. 1895-late 1950s (Cunningham 1982:82)	not photographed; for similar mark see Plate 8o
162a	pw plate/saucer	impressed, 8	unidentified	workman's mark or batch mark; see Plate 6k
162b	ww plate/saucer	impressed, U	unidentified	not photographed
162d	i plate	tp, black, incomp coat of arms w/lion, no company name showing	unidentified	not photographed
162f	ww saucer/plate	hp, dk green, STEUBENVILLE . . ./ CHIN. . .	probably Steubenville Pottery Co., Steubenville, Ohio, ca. 1879-1900 (Ketchum 1971:185; Ramsey 1947:231)	see Plate 7g

TABLE 2. (continued)

Catalog number	Vessel description	Backmark description	Manufacturer and dates of company	Remarks
162h	ww/i saucer	tp, black, incomp griffin over coat of arms w/. . . <i>AYER</i>	probably T.J. & J. Mayer, Dale Hall, Burslem, 1843-55 (Godden 1964:424; 1972: 14-15)	not photographed

Vessels 126, 162c, e, and g have fragmentary backmarks.

Five sets occur in the assemblage (Table 1). One is a cranberry transfer-printed dinner set, and another dinner set is composed of whiteware vessels with handpainted border-lined decorations. The remaining three sets have handpainted floral decoration. Two are of whiteware: One is a sprig-pattern tea set and the other is a possible dinner set with thick-and-thin-line designs. The third is a softpaste porcelain tea set (?) with broadline floral decoration.

Seventeen vessels are backmarked (Table 2 and plates 6k; 7g, i; 8f). Five are unidentified workmen's marks and two are unidentified manufacturers' marks. Of the remaining six, three are British manufacturers' marks and three are American manufacturers' marks. The

British marks include those of Alfred Meakin (1873/75-), J. and G. Meakin (1852-90), and T. J. and J. Mayer (1843-55), the latter with an American importer's mark. The American marks include those of Crown Pottery Co. (Indiana [1891-1905]), W. S. George (Pennsylvania and Ohio [mid-1890s-late 1950s]), and the Steubenville Pottery Co. (Ohio [ca. 1879-1900]).

The proportions of major decorative classes in the assemblage are relatively consistent: edge-decorated—29%, handpainted—25%, and transfer-printed—23%, with the appearance of a new class—undecorated—accounting for 17% of the vessels (Table 4). A characteristic of the component is the wider variety of decorative classes that comprises the remainder of the assemblage.

TABLE 3.
Frequencies and Percentages of Vessels by Decorative Class from
the Pre-1840 Context at the Mappin-Murphy Site

Class	Number of vessels	Percentage of assemblage	Remarks	Class	Number of vessels	Percentage of assemblage	Remarks
Transfer printed				Handpainted			
Nonraised				(nonraised)			
Blue				Floral			
Medium and dark	1	2.4	ww	Broadline	1	2.4	ww
Medium and light	1	2.4	ww	Overglaze/underglaze	4	9.5	sp
Cranberry	9	21.4	ww	Sprig	2	4.8	ww
Purple	2	4.8	1 pw, 1 ww	Thick line	1	2.4	ww
Subtotal	13	31.0		Thick and thin line	3	7.1	2 ww, 1 sp
Edge decorated (raised)				Annular/slip banded	3	7.1	ww
Shell				Subtotal	14	33.3	
Handpainted	6	14.3	5 ww, 1 pw	No decoration except body molding	1	2.4	p
Other	4	9.5	ww	No decoration	2	4.8	1 tk ww, 1 yw
Handpainted							
Nonpainted, nontransfer printed	2	4.8	1 ww, 1 sp	Total	42	100.1	
Subtotal	12	28.6					

TABLE 4.
Frequencies and Percentages of Vessels by Decorative Class from the
Area outside the Pre-1840 Context at the Mappin-Murphy Site

Class	Number of vessels	Percentage of assemblage	Remarks	Class	Number of vessels	Percentage of assemblage	Remarks
Transfer printed				Other			
Raised				Handpainted	14	10.2	9 ww, 1 pw, 3 sp, 1 i
Purple	2	1.5	ww	Nonpainted/ nontransfer			
Nonraised				printed	4	2.9	1 ww, 3 i
Black	2	1.5	ww	Subtotal	40	29.1	
Blue				Handpainted (nonraised)			
Flow	5	3.6	ww	Floral			
Medium and dark	2	1.5	ww	Broadline	3	2.2	3 sp
Medium and light	2	1.5	ww	Overglaze/ underglaze	2	1.5	1 ww, 1 sp
Brown	1	.7	ww	Sprig	3	2.2	ww
Cranberry	8	5.8	ww	Thick line	4	2.9	ww
Green	2	1.5	ww	Thick and thin line	6	4.4	4 ww, 1 pw, 1 sp
Purple	6	4.4	3 ww, 3 tk ww	Thin line	3	2.2	ww
Two-tone	1	.7	ww	Border lined/ banded	6	4.4	1 i, 5 ww
Subtotal	31	22.7		Annular/slip banded	5	3.6	ww
Decal				Slip glazed	2	1.5	1 Rocking- ham, 1 rw
Raised				Subtotal	34	24.9	
Floral	1	.7	tk ww	No decoration except body molding	5	3.6	3 ww, 2 i
Nonraised				No decoration	24	17.5	5 ww, 2 tk ww, 1 pw, 11 i, 3 sp, 2 yw
Floral	2	1.5	1 ww, 1 sp				
Subtotal	3	2.2					
Edge decorated (raised)							
Shell							
Handpainted	10	7.3	9 ww, 1 pw				
Nonpainted/ nontransfer printed	4	2.9	2 ww, 1 pw, 1 i				
Floral							
Nonpainted/ nontransfer printed	8	5.8	6 ww, 2 i				
				Total	137	100.0	

The composition of the edge-decorated class is similar to that found in the pre-1840 deposit: Shell and similar edge-decorated vessels of various wares account for more than two-thirds of the category (Plate 3a, c). However, raised floral and other embossed-edge designs account for the remainder, and they can be classified as post-1840 developments (Plate 3j).

The percentage of handpainted ceramics declines somewhat from that found in the earlier deposit (from 33% to 25%), but it continues as a popular decorative technique on whiteware, pearlware, and softpaste porcelain. Ironstone almost never is decorated in this

fashion. The types of floral decoration noted earlier (broadline [Plate 5h], underglaze/overglaze, sprig, thick line [Plate 6a], etc.) continue, but more infrequently. Annular/slip-banded vessels are present (Plate 4g, i), and two new handpainted classes occur—border lined/banded (whiteware and ironstone) and slip glazed (Rockingham and redware). Two variants of border lined/banded were popular well after mid-century—tea-leaf luster-brown ironstone and gold border-line decoration on whiteware and ironstone.

Transfer-printed decoration is less dominant than in the pre-1840 deposit, and it composes nearly one-

quarter of the assemblage (plates 1b, d-e, h; 2c-h). Blue and red shades still predominate—blues (7%), cranberry (6%), and purple (6%)—with other colors (black, brown, green, and two-tone) each representing less than 2% of the total number of vessels. Decal decoration used with or without raised decoration is a class that began in the latter part of the nineteenth century. Although there are only three examples, accounting for 2% of the assemblage (Plate 5l), they indicate clearly the mixed nature of the post-1840 deposit at Mappin-Murphy. The 24 undecorated vessels (primarily ironstone and whiteware), representing 17% of the total, is a fourfold increase over the number in the pre-1840 deposit.

In summary, the two deposits at Mappin-Murphy yielded quite similar assemblages in terms of the three major nineteenth-century decorative classes—transfer printed, edge decorated, and handpainted. Subtle differences in the quantity of various subclasses offer clues to the temporal positions of the two deposits. Post-1840 ceramic innovations, such as ironstone, decal decoration, less fugitive gilding, and the tea-leaf luster type of decoration, can serve as excellent horizon markers in assemblage analysis.

MAPPIN-VAUGHN

Forty-five vessels (from 345 sherds [excluding 300 small pieces]) were identified in the Mappin-Vaughn assemblage. Twenty-six vessels (58%) are of ironstone, 14 (31%) are of whiteware, 2 (4%) are of softpaste porcelain, 1 (2%) is of yellow ware, 1 (2%) is of Rockingham and 1 (2%) is of a slip-glazed soft whiteware.

Five dinner sets were recognized (Table 5): two of ironstone—one with raised-floral edge decoration and one with luster-brown tea-leaf decoration; two of whiteware—one with a rust-colored transfer-print and one with no decoration except body molding; and one of softpaste porcelain decorated with floral decals.

Fourteen backmarks (Table 6 and plates 6g-h, o; 7e; 8a, c, l) are present. Two are fragmentary, two are unidentified workmen's marks, and one is an unidentified manufacturer's mark. Eight of the remainder are from British potteries—Alfred Meakin, J. and G. Meakin, J. W. Pankhurst (1850-82), and Doulton and Co. (1882-). The Peoria Pottery Co. (1873-94) was the only American concern represented on a marked piece. Since American potters less frequently marked their wares, we feel safe in suggesting that area inhabitants probably were using more American-made pottery than this sample indicates.

The percentages of decorative classes in the Mappin-Vaughn assemblage (Table 7) differ significantly from those in earlier assemblages such as the pre-1840 deposit at Mappin-Murphy. Undecorated vessels (all ironstone) and edge-decorated vessels (mostly ironstone) account

TABLE 5.
Vessel Form and Decoration by Set in the
Ceramic Assemblage from the
Mappin-Vaughn Site

Set	Vessel number	Vessel form	Decoration
a	7, 13, 16	saucer, plate, shallow bowl	raised nonpainted/nontp floral edge, i
b	14, 15	plate, saucer	nonraised floral decal, yellow, green, red, sp
c	19, 26, 33a	wash pitcher, cup, saucer/plate	nonraised hp border lined/banded, luster brown, i
d	21, 28	saucer, cup	nonraised tp, rust, floral, ww
e	23, 27a	cup, cup and saucer	nonraised nonpainted/nontp, molded vessel shape, ww

for 26% of the assemblage, handpainted vessels for 18%, transfer-printed vessels for 13%, and decal-decorated vessels for 9%. Vessels lacking all decoration except body molding account for 7% of the assemblage.

The assemblage is characterized by the large percentages of undecorated and edge-decorated ironstone. This contrasts with earlier assemblages, in which one finds very little undecorated ironstone. In addition, earlier edge decoration is found more frequently on whitewares. However, by the last quarter of the nineteenth century, some thinner ironstones were being produced that were a perfect medium for the delicate floral edge decoration (some in "Art Nouveau" style) of the period. The plain, heavy ironstones produced at that time were too thick to display effectively the more delicate low-relief designs. We see none of the elaborate edge-molded and paneled, unpainted forms common ca. 1850-60 (compare figures 21e-f, 22a-d, and 23b).

Compared to the pre-1840 Mappin-Murphy assemblage, the percentage of vessels with handpainted decoration is much lower—18% versus 33%. The major difference is that the compositions of the handpainted subclasses in the two assemblages are quite distinct. For example, in the Mappin-Vaughn assemblage only three of eight handpainted vessels have floral decoration. One has a tea-leaf design and two have thick-line decorations—distinct from the thick-line decoration in the pre-1840 Mappin-Murphy assemblage. Some handpainted vessels from Mappin-Vaughn, such as the border-lined/banded yellow ware and the slip-glazed Rockingham examples, probably were American made, whereas earlier handpainted vessels were primarily white earthenwares of British origin. No annular/dipped vessels were found at

TABLE 6.
Summary of Backmarks in the Ceramic Assemblage
from the Mappin-Vaughn Site

Catalog number	Vessel description	Backmark description	Manufacturer and dates of company	Remarks
4	ww cup	hp, blue, <i>R3</i>	unidentified	not photographed
5	i saucer	tp, black, incomp lion motif	unidentified	see Plate 6o
7	i saucer	tp, black, coat of arms w/ <i>ROYAL IRONSTONE CHINA/ ALFRED MEAKIN, LTD./ENGLAND</i> below	Alfred Meakin (Ltd.), Royal Albert, Victoria & Highgate potteries, Tunstall, 1873/75- (Godden 1964:425-26; 1972:142)	set with vessel 13; use of "Ltd." indicates a post-1897 date (Godden 1964:425-26); see Plate 8c
8	i saucer	tp, black, incomp bottom portion of coat of arms, w/letters. . . <i>E CHINA/ . . . MEAKIN</i>	J. & G. Meakin, Hanley, Cobridge & Burslem, 1852-90 (Godden 1972:75)	firm produced large quantities of earthenware, their specialty being white granite ware, imitating French china (Godden 1972:75); not photographed; see Plate 8f for more complete example
13	i plate	same as vessel 7	see vessel 7	not photographed; set w/ vessel 7 (see Plate 8c)
22	i saucer/plate	tp, blue, incomp lined world motif w/ . . . <i>ED MEAK.</i> . . in the center	see vessel 7	use of globe motif dates ca. 1875-97 (Godden 1964:425-26); see Plate 8a
23	ww cup	tp, rust, incomp crown & seal motif w/letters <i>D . . . /B. . .</i>	Doulton & Co., Burslem, 1882- (Cushion 1980:106)	fine earthenware & china made at Burslem ca. 1882-1902 (Cushion 1980:106); set w/vessel 27a (see Plate 6g,h)
27a	ww cup & saucer (2 sherds)	tp, rust, incomp crown & seal motif w/ letters. . . <i>PORCELAIN DOUL.</i> . . / . . . <i>SLE. . . / . . . LAND</i> below	see vessel 23	mark says ". . . Porcelain" but this probably refers to semiporcelain, actually ww; set with vessel 23; see Plate 6g, h
27b	i plate/saucer	tp, black, incomp coat of arms with. . . <i>STONE CHIN.</i> . . above & <i>WARRANTED</i> below	probably Peoria Pottery Co., Peoria, Ill., 1873-94 (Thorne 1947:142)	see Plate 7c
27c	i plate/saucer	tp, black, incomp coat of arms w/. . . <i>KHUR.</i> . .	probably J.W. Pankhurst & Co., Hanley, 1850-82 (Godden 1964:481)	see Plate 8l
27d	i plate/saucer	tp, black, incomp garter-shaped motif with the words <i>STONE CHINA</i> inside	unidentified	not photographed; see Plate 6i for more complete example

Vessels 6 and 17 have fragmentary backmarks.

TABLE 7.

**Frequencies and Percentages of Vessels by
Decorative Class from the Mappin-Vaughn Site**

Class	Number of vessels	Percentage of assemblage	Remarks
Transfer printed			
Nonraised			
Black	1	2.2	ww
Blue			
Medium and			
light	1	2.2	ww
Brown	1	2.2	ww
Cranberry	1	2.2	ww
Rust	2	4.4	ww
Subtotal	6	13.2	
Decal			
Nonraised			
Floral	4	8.8	2 ww, 2 sp
Edge decorated (raised)			
Floral			
Nonpainted/ nontransfer printed	6	13.3	i
Other			
Nonpainted/ nontransfer printed	6	13.3	4 i, 2 ww
Subtotal	12	26.6	
Handpainted (nonraised)			
Floral			
Tea leaf	1	2.2	i
Thick line	2	4.4	ww
Border lined/ banded	3	6.6	2 i, 1 yw
Slip glazed	2	4.4	1 Rocking- ham, 1 other
Subtotal	8	17.6	
No decoration except body molding	3	6.6	2 ww, 1 i
No decoration	12	26.6	i
Total	45	99.4	

Mappin-Vaughn, though this may be a function of the small sample size.

By the 1860s the popularity of transfer-printed wares was declining. The percentage of this class (13%) at Mappin-Vaughn is lower than the percentages noted at the other sites, which range from 19% of the sample at Harvel Jordan to 31% at pre-1840 Mappin-Murphy. One example each of black (with yellow overpainting [Plate 1f]), blue, brown, and cranberry transfer prints was

found, in addition to two examples of an unusual rust-colored transfer print. Rust is a later color, introduced toward the end of the century. These examples were made by Doulton between ca. 1882 and 1902; the transfer-printed motif consists of an asymmetrically applied dendritic floral spray, employed as an accent near the cup rim. This open-design style contrasts with earlier transfer prints where the design (scenic, floral, or abstract) covers most of the vessel.

Decal-decorated vessels represent 9% of the Mappin-Vaughn assemblage, and the only softpaste porcelain vessels from the sample are decorated in this manner. Decalomania is a technique similar in many respects to transfer printing, and appears to have become increasingly popular with the decline of the classic transfer-printed styles.

Not surprisingly, there are no vessels with shell-edge decoration. Also absent are handpainted polychrome floral whitewares in the sprig, broadline, and thick-line and thick-and-thin-line subclasses, and softpaste porcelain with underglaze/overglaze floral designs.

SAMUEL H. SMITH

One hundred thirty vessels were identified from the 738 sherds (not including 1297 fragments) in the Samuel H. Smith assemblage (Appendix I). One hundred one vessels (78%) are of whiteware; 16 (12%) are of softpaste porcelain; 5 (4%) are of ironstone; and there are two vessels each of hardpaste porcelain, yellow ware, milk glass, and redware.

Seven sets were identified, all of whiteware (Table 8): two tea sets with handpainted polychrome sprig decoration and the rest dinner sets—two with raised floral edge (unpainted), two with transfer prints (one blue, one cranberry), and one with a gold border-lined/banded decoration.

Twenty-three vessels are backmarked (Table 9 and plates 7h, i; 8c, o). Eight are too fragmentary to identify, six are unidentified manufacturers' marks (four American, one British, and one German [Bavarian]), two are British workmen's marks, and one is a British pattern mark. Identified marks include three from Britain—Alfred Meakin and T. J. and J. Mayer, the latter with an American importer's mark—and three from the United States—Crown Pottery Co. and W. S. George.

The percentages of two of the three major decorative classes are quite similar: Transfer-printed vessels account for 20% of the assemblage and edge-decorated for 18% (Table 10). Handpainted vessels account for 48% of the assemblage, the highest proportion of this decorative class found at any of the sites. Undecorated vessels make up 7% of the assemblage, decal-decorated vessels 4% (Plate 5i), and vessels with no decoration except body molding 3%.

A wide variety of transfer-print colors occurs in the assemblage (plates 1c, g, j; 2i), with medium and light blue (8%) and cranberry (6%) being the most popular. Other colors include flow blue, two-tone, green, brown, and black (roughly 1% each). The edge-decorated category consists of green-painted (Plate 3d) and blue-painted shell edge (7%) and floral edge (1%), and unpainted floral edge (6%) and other edge (less than 1%). Interestingly, although shell edge accounts for 7% of the vessels none of the similarly executed edge-decorated varieties, such as cord and hanging fern or dot and plume, that usually co-occur with shell edge was found. The unpainted floral-edge examples are primarily whiteware, decorated with low-relief motifs characteristic of the last quarter of the nineteenth century.

Over 25% of the assemblage consists of whiteware and softpaste porcelain vessels with handpainted floral decoration. Plate 5f illustrates an unusual softpaste porcelain sherd with a handpainted border stripe and a stenciled floral design below. There is a single example of underglaze/overglaze decoration on softpaste porcelain (Plate 5g). The remainder of the handpainted floral vessels are decorated in styles typical of the 1840-60 period, including broadline (Plate 5d), sprig (Plate 5c), thick-and-thin line, and flow floral (Plate 4j). Border-lined/banded vessels account for 11% of the assemblage,

TABLE 8.
Vessel Form and Decoration by Set in the
Ceramic Assemblage from the
Samuel H. Smith Site

Set	Vessel number	Vessel form	Decoration
a	5, 6	plate, plate	raised nonpainted/nontp floral edge, ww
b	18, 19	bowl/saucer, plate/saucer	raised nonpainted/nontp floral edge, ww
c	42, 43	cup, saucer	nonraised hp floral, tk & tn ln sprig, green & blue, ww
d	53-56	cup, saucer, cup, saucer	nonraised hp floral, tk & tn ln sprig, green, red & black, ww
e	72, 73	cup, saucer	nonraised tp, cranberry, floral & abstract, molded vessel shape, ww
f	90-93	saucer, saucer, cup, cup	nonraised tp, med & lt blue, floral border & scenic, ww
g	116-119, 121	plate, saucer, cup, bowl, cup	nonraised hp border lined/banded, tk ln border stripe, gold, ww

TABLE 9.
Summary of Backmarks in the Ceramic Assemblage
from the Samuel H. Smith Site

Catalog number	Vessel description	Backmark description	Manufacturer and dates of company	Remarks
2	ww cup	impressed, <i>MADE IN USA</i>	unidentified American company	not photographed
4	ww saucer	tp, green, stylized fan/shell motif w/ <i>DORIC/USA</i>	unidentified American company	see Plate 7h
7	ww plate	stamped, black, <i>DERWOOD/W.S. GEORGE 167A</i>	W.S. George, East Palestine, Ohio, and Canonsburg and Kittanning, Pa., ca. 1895-late 1950s (Cunningham 1982:82)	"Derwood" refers to shape of plate (Kovel and Kovel 1983:195); see Plate 8o
10	sp indet form	stamped, gold, <i>BAVARIA</i>	unidentified German	not photographed
22	sp saucer	stamped, brown, crown motif w/ <i>ROYAL SEMI-PORCELA</i> . . . above; impressed square motif w/ <i>N</i> alongside	possibly Alfred Meakin (Ltd.), Royal Albert, Victoria & Highgate potteries, Tunstall, 1873/75- (Godden 1964:425-26; 1972:142)	see Plate 8e

TABLE 9. (continued)

Catalog number	Vessel description	Backmark description	Manufacturer and dates of company	Remarks
89	ww plate	impressed, <i>OPAQUE GRANITE CHINA</i> in a shield motif, w/traces of dark brown tp floral (probably pattern name mark)	unidentified	not photographed
122a	i indet form	impressed, circle w/ a plus sign inside	unidentified	not photographed
122b	i indet form	impressed, doughnut shape	unidentified	not photographed
122c	i indet form	impressed, <i>IRONSTONE</i>	unidentified	not photographed
122d	ww indet form	impressed, <i>MA.../U.S...</i>	unidentified American company	not photographed
122i	i plate	tp, black, ... <i>FILLEY</i> ... <i>OUIS MO...</i> J. & J. <i>MAYER, LONGPORT</i> , inside a bell (?) motif	E.A. & S.R. Filley, St. Louis, Mo., were importing ironstone from England during 1845-60 (cf. DeBarthe 1979:75); this example was made for them by T.J. & J. Mayer, Dale Hall, Burslem, in business from 1843 to 1855 (Godden 1964:424; 1972: 14-15)	see Plate 71
122j	i fragments rep 4 4 plates/saucers	stamped, dk green, <i>DERWOOD</i> ... <i>W.S.</i> <i>GEORGE 160</i> ...	see vessel 7	"Derwood" refers to shape of plate (Kovel & Kovel 1983:195); not photographed; see Plate 8n, o for more complete examples
122l	i fragments rep a saucer & a plate	tp, black, ... <i>PORTED</i> / ... <i>RT</i> ...	probably same mark as on vessel 122i	not photographed
122m	i indet	impressed, ... <i>ED STA</i> ... over circular motif w/indet inscription inside	unidentified American company	not photographed
122n	i	tp, blue-green, incomp crown motif w/indet lettering beneath	probably Crown Pottery Co., Evansville, Ind., ca. 1891-1905 (Ketchum 1971:165; Thorne 1947: 124)	not photographed; see Plate 7i for more complete example

Vessels 90, 92, 122e-h, 122k, and 129 have fragmentary backmarks.

the highest percentage of this class among the five assemblages. Other decorative classes include annular/slip banded (five vessels [Plate 4e]) and slip-glazed (one vessel).

Several vessels are fairly good temporal markers. For example, two ironstone vessels with luster-brown decoration probably date to 1880 or after, and several vessels

representing a gold-border-lined/banded whiteware dinner set date post-1860. Several vessels have border-lined decoration combined with a single scenic or floral motif. These probably date to the latter portion of the century. The assemblage also includes four examples of green and red spatter ware—a decorative class dating ca. 1840-80 (Plate 5a).

Despite the lengthy occupation of the site, from ca. 1828 to well into the twentieth century, the ceramic assemblage can be divided into two broad groups—material from 1828 to ca. 1880 and material that post-dates ca. 1880. The earlier portion of the assemblage coincides with Smith's construction of a cabin on the site in 1828, his rise to prosperity in the early 1850s, and his death in 1872. Characteristic of the earlier period are significant proportions of whiteware and softpaste porcelain relative to ironstone, a predominance of handpainted vessels with various styles of floral decoration and spatter decoration, and a considerable amount of transfer-printed ware. It is interesting that only one undecorated vessel is ironstone, since between 1860 and 1880 heavy, undecorated ironstones were extremely popular. There may have been a hiatus in consumer activity just prior to

TABLE 10.
Frequencies and Percentages of Vessels by
Decorative Class from the Samuel H. Smith Site

Class	Number of vessels	Percentage of assemblage	Remarks
Transfer printed			
Raised			
Green	1	.8	ww
Nonraised			
Black	2	1.5	ww
Blue			
Flow	1	.8	ww
Medium and light	10	7.7	ww
Brown	2	1.5	ww
Cranberry	8	6.2	ww
Green	1	.8	ww
Two-tone	1	.8	ww
Subtotal	26	20.1	
Decal			
Raised			
Floral	1	.8	ww
Nonraised			
Floral	4	3.1	ww
Subtotal	5	3.9	
Edge decorated (raised)			
Shell			
Handpainted	9	6.9	ww
Floral			
Handpainted	2	1.5	sp
Nonpainted/ nontransfer printed	8	6.2	4 ww, 2 i, 2 sp

TABLE 10. (continued)

Class	Number of vessels	Percentage of assemblage	Remarks
Other			
Handpainted	4	3.1	3 ww, 1 p
Nonpainted/ nontransfer printed	1	.8	ww
Subtotal	24	18.5	
Handpainted (nonraised)			
Floral			
Broadline	8	6.2	ww
Overglaze/ underglaze	1	.8	sp
Sprig	10	7.7	ww
Thick line, flow	1	.8	ww
Thick and thin line	9	6.9	1 ww, 8 sp
Thin line	3	3.1	ww
Border lined/ banded	14	10.8	10 ww, 2 i, 2 rw
Sponge/spatter	4	3.1	ww
Annular/slip banded	5	3.8	ww
Slip glazed	1	.8	ww
Other	6	4.6	4 ww, 1 p, 1 sp
Subtotal	62	48.6	
No decoration except body molding	4	3.1	1 ww, 2 sp, 1 milk glass
No decoration	9	6.9	5 ww, 1 i, 2 yw, 1 milk glass
Total	130	101.1	

and after Smith's death, when currently popular items were not purchased by the site inhabitants.

The later portion of the assemblage is characterized by whiteware vessels with decal decoration, nonpainted low-relief floral and other edge decoration, gold border-lined/banded decoration, and the appearance of undecorated or body-molded vessels made of milk glass. Milk glass is an opaque, pressed glassware, usually milky-white in color, though some pieces occur in blue, green, black, and pink. It was produced in large quantities during the 1880s, with tableware of all kinds being popular items (Cole 1967:66).

HARVEL JORDAN

One hundred sixty-one vessels were identified from the 975 sherds (not including 1573 fragments) in the Harvel Jordan assemblage (Appendix I). One hundred thirty vessels (80%) are of whiteware; 15 (9%) are of ironstone; 9 (6%) are of softpaste porcelain; and there are 2 vessels each of milk glass and hardpaste porcelain, and 1 each of pearlware, yellow ware, and redware.

Eighteen sets were identified, all of whiteware (Table 11): eight tea sets, nine dinner sets, and one miscellaneous set of blue shell-edge plates with unusual (possibly unglazed) surfaces. All tea sets have handpainted floral decoration and include examples with polychrome sprig decoration (2); sprig and dot (2); floral and dot (1); broadline floral (1); thin-line floral (1); and thick-and-thin-line floral (1). The dinner sets include examples with transfer-printed decoration (2 cranberry, 1 flow blue); blue sponge (1); green and red spatter (1); nonpainted, low-relief "Art Deco" edge (1); gold bordered/lined/banded edge (1); and a raised floral edge with gilding around the lip (1).

Twenty-seven vessels are backmarked (Table 12 and plates 6j, l, n; 7a-d, f, m; 8i, n). Twelve are too fragmentary to identify, three are unidentifiable company marks, and one is stamped "MADE IN JAPAN" and dates after 1921. Identified marks include four from Britain—T. J. and J. Mayer, with an American importer's mark; Venables and Baines (1851-53); Furnivals (1850-90s); and Johnson Bros. (1883-1913)—and seven from the United States—Edwin M. Knowles (Ohio [1900-63]), W. S. George, D. E. McNicol (Ohio and West Virginia [1914-25]), and Sevres China Co. (Ohio [1900-08]).

TABLE 11.
Vessel Form and Decoration by Set in the
Ceramic Assemblage from the
Harvel Jordan Site

Set	Vessel number	Vessel form	Decoration
a	10, 11	cups	raised nonpainted/nontp other edge, Art Deco style, ww
b	17, 19	plates	nonraised hp border lined/banded, tk ln border stripe, gold, ww
c	38a, b	saucer, cup	nonraised tp, cranberry, abstract & floral, ww
d	40a, b	cup, saucer	nonraised tp, cranberry floral, ww
e	44a, b	cup, saucer	nonraised hp spatter, green and red, ww

TABLE 11. (continued)

Set	Vessel number	Vessel form	Decoration
f	45a-c	cup, saucer, plate	nonraised hp sponge, blue, ww
g	46a, b	saucer, cup	nonraised hp floral, tk & tn ln sprig, bright green, pink, red & black, ww
h	53, 56	plates	raised hp shell edge, unglazed surface, blue, ww
i	62, 63	cup, saucer	nonraised hp border lined/banded, blue tk ln border stripe between two red tn ln border stripes, ww
j	84, 85	sm plate/ saucer, sugar bowl	raised hp floral edge, raised boss & floral w/ tn ln border floral, gold, ww
k	109, 110	cup, saucer	nonraised tp, blue, flow, abstract border & floral, ww
l	118, 119	saucer, cup	nonraised hp floral, tk & tn ln sprig & dot, red & dk green, ww
m	120, 121	saucer, cup	nonraised hp floral, tk & tn ln sprig, blue, black, red, lt green & pink, ww
n	122, 123	saucer, cup	nonraised hp floral, tk & tn ln sprig & dot, green, red & black, ww
o	125, 126	cup, saucer	nonraised hp floral, tk ln border stripe, blue/dk green, w/ tk & tn ln floral, dk green & blue/black, ww
p	128, 129	cup, saucer	nonraised hp floral, broadline style, red & blue, ww
q	136, 137	cup, saucer	nonraised hp floral, tk & tn ln floral & dot, med & dk blue, w/wash over all, ww
r	145a, b	cup, saucer	nonraised hp floral, tn ln floral, lt blue, ww

The percentages of the major decorative classes in the assemblage (Table 13) are similar to those from the Samuel H. Smith site, except that the percentages of vessels with handpainted decoration is smaller—42% at Harvel Jordan versus 48% at Samuel H. Smith. Edge-decorated vessels constitute 22% of the assemblage, transfer-printed vessels 20%, decal-decorated vessels 7% (Plate 5k), vessels with no decoration except body molding 5%, and undecorated vessels 4%.

TABLE 12.
Summary of Backmarks in the Ceramic Assemblage
from the Harvel Jordan Site

Catalog number	Vessel description	Backmark description	Manufacturer and dates of company	Remarks
2	ww bowl	stamped, dk green, <i>IVORY COLOR T</i>	Edwin M. Knowles China Co., East Liverpool, Ohio, 1900-63 (Gates & Ormerod 1982: 102)	"T" = trellis pattern; see Plate 7c; semivitreous dinnerware, same mark but with "L" instead of "T" dated ca. 1927 (Gates & Ormerod 1982: 102)
3	ww saucer	stamped, dk green, <i>IVORY COLOR I</i> ("I" is incomple—probably an "L")	see vessel 2	1920s? not photographed
4	ww serving bowl	stamped, black, <i>WHITE GRANITE/W.S. GEORGE 578</i> . . .	W.S. George, East Palestine, Ohio, and Canonsburg and Kittanning, Pa., ca. 1895-late 1950s (Cunningham 1982:82)	see Plate 8n
5	i saucer	impressed <i>FURNIVAL</i>	Furnivals, Ltd., Cobridge, ca. 1850-1960s (Thorne 1947:52; Godden 1972:34)	1850-90; after 1890 Furnivals primarily used printed name or initial marks; not photographed
6	ww plate	stamped, dk green urn motif w/ <i>VITREOUS</i> inside & <i>EDWIN M. KNOWLES/CHINA CO./28-2-10</i> below	see vessel 2	vitreous ware made by Knowles 1900-48; this piece dates to 1928 (cf. batch mark) (Gates & Ormerod 1982:99); see Plate 7a
8	ww plate	tp, med blue diamond-shaped registration mark w/ <i>U</i> . . . above & <i>VENABLES & BAINES</i> below	Venables & Baines, Burslem, ca. 1851-53 (Godden 1964:633)	"U" = Union pattern (cf. Waselkov <i>et al.</i> 1975:76-77), registered 2/17/1852 (parcel no. 1, patent no. 83826) (Cushion 1980: 175); see Plate 8i
105	i wash pitcher	tp, black, bird holding banner w/ <i>S.R. FILLIS</i> inside & <i>MANUFACTURED BY IMP.</i> . . . above	E.A. & S.R. Filley, St. Louis, Mo., were importing ironstone from England between 1845-60 (cf. DeBarthe 1979:75); this example was made for them by T.J. & J. Mayer, Burslem, in business from 1843-55 (Godden 1964:424; 1972: 14-15)	see Plate 7m; a more complete example is shown in Plate 7n
142	ww plate	stamped, dk green, <i>D.E. McNICOL</i> . . . <i>ARKSBURG</i> . . .	D.E. McNicol Pottery Co., Clarksburg, W.Va., plant opened in 1914, specializing in plain white and vitrified china for commercial consumption (Gates & Ormerod 1982: 185, 189)	made semivitreous dinnerware ca. 1914-25 (Gates and Ormerod 1982: 185, 189); see Plate 7f

TABLE 12. (continued)

Catalog number	Vessel description	Backmark description	Manufacturer and dates of company	Remarks
143	sp saucer	stamped, lt green, <i>MADE IN JAPAN</i>	unidentified	use of word "Japan" substituted for Nippon after 1921 (Ray 1974:149)
157d	i plate	tp, black, incomp coat of arms w/lion & unicorn	unidentified	see plate 6l
157e	ww plate/saucer	stamped, blue, incomp concentric circles w/. . . <i>ORA*</i> inside	unidentified	not photographed
157f	i plate/saucer	tp, black, incomp coat of arms w/lion visible	unidentified	see Plate 6n
157i	ww/i saucer	tp, green, incomp crown (?) motif w/. . . <i>ON BRO</i> . . .below	probably Johnson Bros. (Hanley) Ltd., Hanley & Tunstall 1883-1913 (Godden 1964:355-56)	see Plate 6j
157j	ww plate	stamped, dk green, incomp urn motif; see vessel 6	see vessel 2	see Plate 7b; Plate 7a shows a more complete example
157k	ww plate	stamped, dk green fleur de lis motif w/. . . <i>ELMAR</i> below	Sevres China Co., East Liverpool, Ohio, established 1900 (Gates and Ormerod 1982:241; Thorne 1947:147)	Belmar pattern, a semivitreous table and toilet ware, 1900-08 (Gates and Ormerod 1982:241); see Plate 7d

Vessels 7, 9, 29, 45c, 48, 98, 155a, 157a, c, g, and h have fragmentary backmarks.

Transfer-printed wares at Harvel Jordan occur in a variety of colors (Plate 1a, l), with cranberry (6%), flow blue (4%), and medium and light blue (3%) being the most popular. Minor colors include medium blue, dark blue, and black (2% each); brown (1%); and green and rust (less than 1% each). Green and blue painted and unpainted shell-edge vessels make up 8% of the assemblage, painted-floral vessels 1%, and other painted-edge vessels 2% (including an example of a green cord and tassel edge). Low-relief, nonpainted floral edge accounts for only 1% of the sample (compared to 6% at Samuel Smith), and nonpainted "other" edge accounts for 10%. The "other" category is dominated by an abstract angular style we call Art Deco (plates 5j; 6c-d), which was used primarily on whiteware, though one hardpaste porcelain example was noted. The style appears to date ca. 1905-35.

Handpainted floral decoration (primarily on white-ware) accounts for 21% of the Jordan assemblage. Both the pre-1840 Mappin-Murphy and Samuel H. Smith assemblages also exhibit large percentages of this decorative class, 26% and 25% respectively, though the Smith assemblage is more similar to Harvel Jordan in terms of decorative classes represented than it is to the pre-1840 Mappin-Murphy assemblage. No underglaze/overglaze

floral decoration was found on vessels from Jordan, though many of the styles popular during the 1840-60 period are well represented, including broadline, sprig (largest percentage of the five sites [8%]) (Plate 5e), and thick-line and thin-line floral. The one example of handpainted floral decoration on ironstone is a tea-leaf luster cup (Plate 6b). Border-lined/banded vessels make up 9% of the assemblage, compared with 11% at Samuel H. Smith (Plate 4c), and annular/slip banded vessels (Plate 4d) make up 3%. The handpainted class also includes two blue, red, and green spatter-decorated vessels (representing a set), three blue sponge-decorated vessels (representing a set) (Plate 5b), and an unusual example with a stenciled brown floral design with handpainted fill-in (Plate 1k).

Based on the temporal ranges represented by the decorative classes in the Jordan assemblage, it can be divided into two groups—material from ca. 1840-60 and material that postdates 1880/90. The earlier ceramic group complements the architectural analysis of the Jordan house, which suggests that a one-room structure was built between 1830 and 1850. Although the property changed hands several times after 1841, it is not clear from available land records whether the house was occupied continuously throughout the century. The hiatus between ca. 1860 and 1880 seen in the ceramic

assemblage suggests the house may not have been occupied continuously.

Notably sparse in the assemblage are horizon markers from the 1860-80 period, such as undecorated ironstones and nonpainted raised-edge ironstones (either heavy ironstones with high-relief edge decoration or thinner ironstone with more delicate low-relief edge decoration). No major British ironstone producer of the period, such as Alfred Meakin, J. and G. Meakin, or T. J. and J. Mayer, whose products appear at the other sites, is represented on the backmarked vessels from Jordan.

The earlier assemblage is characterized by whitewares with handpainted floral decoration, spatter decoration, and transfer-printed decoration in various colors. There also is a sizeable percentage of painted and nonpainted shell-edge whitewares. Definite post-1880/90 elements occur in the later assemblage, including decal-decorated whitewares, brown-luster tea-leaf ironstone, milk glass, and nonpainted low-relief edge decoration in Art Deco style—primarily on whitewares. It appears that, at least to the site occupants, ceramics produced by American companies were much more popular during this time period than they were earlier in the century. Seven of the nine backmarks dating after 1883 are from American potteries, which may relate to the imposition of protective tariffs beginning ca. 1890 (e.g., the McKinley Tariff Act) that greatly reduced the quantity of British imports into this country.

TABLE 13.
Frequencies and Percentages of Vessels by
Decorative Class from the Harvel Jordan Site

Class	Number of vessels	Percentage of assemblage	Remarks
Transfer printed			
Raised			
Brown	2	1.2	ww
Nonraised			
Black	3	1.9	ww
Blue			
Flow	7	4.3	ww
Medium and dark	3	1.9	ww
Medium and light	5	3.1	ww
Brown	1	.6	ww
Cranberry	9	5.6	ww
Green	1	.6	ww
Rust	1	.6	ww
Subtotal	32	19.8	
Decal			
Raised			
Floral	4	2.6	ww

TABLE 13. (continued)

Class	Number of vessels	Percentage of assemblage	Remarks
Nonraised			
Floral	7	4.3	4 ww, 3 sp
Subtotal	11	6.9	
Edge decorated (raised)			
Shell			
Handpainted	11	6.8	10 ww, 1 pw
Nonpainted/nontransfer printed	2	1.2	ww
Floral			
Handpainted	2	1.2	ww
Nonpainted/nontransfer printed	2	1.2	ww
Other			
Handpainted	3	1.9	2 ww, 1 tk ww
Nonpainted/nontransfer printed	16	9.9	11 ww, 1 p, 4 i
Subtotal	36	22.2	
Handpainted (nonraised)			
Floral			
Broadline	4	2.6	ww
Sprig	13	8.0	ww
Tea leaf	1	.6	i
Thick line	3	1.9	ww
Thick and thin line	9	5.6	8 ww, 1 p
Thin line	5	3.1	3 ww, 2 sp
Border lined/banded	14	8.7	10 ww, 1 tk ww, 1 i, 1 sp, 1 rw ww
Sponge/spatter	5	3.1	
Annular/slip banded	5	3.1	ww
Slip glazed	3	1.9	2 ww, 1 milk glass
Other	5	3.1	2 ww, 3 sp
Subtotal	67	41.7	
No decoration except body molding	8	5.0	1 ww, 5 i, 1 tk i, 1 milk glass
No decoration	7	4.3	3 i, 3 ww, 1 yw
Total	161	99.9	

SMITH-GOSNEY

Ninety-six vessels were recognized from 1637 sherds (not including 2424 fragments) in the Smith-Gosney assemblage (Appendix I). Fifty vessels (52%) are of whiteware, 25 (26%) are of ironstone, 9 (9%) are of softpaste porcelain, 4 (4%) are of pearlware, 4 (4%) are of indeterminate whiteware/ironstone, 2 (2%) are of yellow ware, and there is 1 each of hardpaste porcelain and brown-paste ware (1% each).

Seven sets are present: four of whiteware, two of softpaste porcelain, and one of ironstone (Table 14). Whiteware examples include one tea set with handpainted polychrome sprig decoration, an alphabet plate set, and two dinner sets—one with light and medium blue transfer-printed decoration and the other with a handpainted raised edge combined with decal decoration. The two softpaste porcelain tea sets have handpainted underglaze/overglaze floral decoration, and the ironstone example is a handpainted and edge-molded Gaudy Ironstone dinner set in the blinking/seeing eye pattern.

Thirty-one vessels are backmarked (Table 15 and plates 6f, i, m, p; 7k, n; 8b, d, g-h, j-k, m, p). Five marks are too fragmentary to identify and 15 are from unidentified companies, probably all British. Four of these are workmen's marks, three are transfer-printed pattern-name marks, and eight are manufacturers' marks. The identifiable marks are of British companies: E. Challinor and Co. (1853-62); John Edwards and Co. (1847-1900); Liddle, Elliot and Son (1862-71); T. J. and J. Mayer (one example exhibiting an American importer's mark); Alfred Meakin; and J. and G. Meakin.

The percentages of major decorative classes in the assemblage (Table 16) do not differ radically from those found at the other sites with long-term deposits, though there are some intraclass differences. Edge-decorated vessels account for 28% of the assemblage, transfer-printed vessels for 26%, and handpainted vessels for 23%. Of the remaining vessels, 1% have decal decoration, 2% have no decoration except body molding, and 20% are undecorated.

It is interesting that only six edge-decorated vessels have shell or related embossed-edge decoration. These include two pearlware examples—one with a blue cord and vertical herringbone edge (Plate 3g) and the other with a blue cord and fish-scale edge (Figure 21a)—and four whiteware examples—two blue shell edge and two unpainted shell edge (Figure 21d; Plate 6c). This is the lowest percentage found in the assemblages (excluding that from Mappin-Vaughn [1865-95], which had no examples). We estimate that the original one-room structure at the site was constructed ca. 1840, so the paucity of shell-edge decoration suggests that either its popularity peak in the area occurred before 1840 or other avail-

TABLE 14.

Vessel Form and Decoration by Set in the Ceramic Assemblage from the Smith-Gosney Site

Set	Vessel number	Vessel form	Decoration
a	6a-c	plate/platter, saucer, cup	raised hp other edge, molded rim, flow blue (uglz), red & gold (oglz) border w/ tk & tn ln hp below (Gaudy Ironstone in "blinking/seeing eye" pattern), i
b	42, 59	saucer, cup	nonraised tp, med & lt blue, abstract border & scenic, ww
c	43, 44, 50	saucer, saucer, cup	nonraised hp floral, tk & tn ln sprig, pink, blue, black & lt green, ww
d	47, 57, 84	saucer, cup, plate	raised hp other edge, raised letters around rim, only one visible, . . . I; w/hp tk & tn ln border stripes, dk green, alphabet plate set?, ww
e	49, 67	shallow bowl/saucer footed serving bowl	abstract raised edge, gold & green w/ floral decal below, yellow, pink & green, ww
f	69a, b	pitcher, saucer	nonraised hp floral, tk & tn ln floral, pastel blue, green & cranberry red (uglz), yellow (oglz), sp
g	86a, b	cup, saucer	nonraised hp floral, tk & tn ln floral, pastel green & cranberry (uglz), yellow (oglz), sp

able contemporary ceramic decorative classes were preferred by the site occupants.

The remainder of the edge-decorated vessels fall into two categories: handpainted edge and nonpainted edge. The handpainted examples (Appendix I) include three examples of Gaudy Ironstone (Plate 4l), dating ca. 1855-65; two pieces of a whiteware set that have abstract edge decoration with handpainted detail in combination with a floral decal (Plate 4h and Figure 21b), dating 1880-1900; an abstract-edge softpaste porcelain vessel with overglaze floral decoration; a whiteware alphabet plate with handpainted border stripes; and a whiteware cup with an abstract edge trimmed in gold (Figure 21c).

Nine of the 12 nonpainted floral and other edge-decorated vessels (excluding nonpainted shell edge) are of ironstone, 1 is of whiteware/ironstone, and 1 is of

TABLE 15.
Summary of Backmarks in the Ceramic Assemblage
from the Smith-Gosney Site

Catalog number	Vessel description	Backmark description	Manufacturer and dates of company	Remarks
2	ww plate	impressed, X	unidentified	not photographed
7	ww plate	tp, green, incomp, w/ <i>FRUIT BASKET</i> inside basket motif	unidentified	"Fruit Basket" probably pattern name; see Plate 7k
8	ww plate	impressed, 41	unidentified	not photographed
9	i plate	impressed triangular scroll & shield motif w/ <i>IRONSTONE CHINA/</i> <i>E. CHALLINOR + CO.</i>	E. Challinor & Co., Sandyford & Tunstall, 1853-62 (Godden 1972: 49)	not photographed
10	i plate	tp, black, coat of arms w/. . . <i>CHINA/</i> <i>ALFRED MEAKIN./</i> <i>ENGLAND.</i>	Alfred Meakin (Ltd.), Royal Albert, Victoria & Highgate potteries, Tunstall, 1873/75- (Godden 1964:425-26; 1972:142)	mark dates between 1891 and 1897 (Godden 1972: 257); see Plate 8b
11	i plate	tp, black, coat of arms w/ <i>IRONSTONE</i> <i>CHI. /J. & G.</i> <i>MEAKIN/HAN. . /EN/</i> ...	J. & G. Meakin, Hanley, Cobridge & Burslem, 1852- 90 (Godden 1972:75)	1880- (Godden 1972:257); see Plate 8g
13	i plate	tp, black incomp royal garter-shaped motif w/ <i>STONE CHINA</i> inside & eagle above	unidentified; see vessel 94f	1840- (Godden 1964:552); same mark as on vessel 94f (Plate 6i)
14	i plate	tp, black, bird holding banner w/ <i>E.A. & S.R.</i> <i>FILLEY, ST. LOUIS,</i> <i>MO</i> inside & <i>MANUFACTURED</i> <i>FOR/ & IMPORTED BY</i> above; below tp mark, lightly impressed diamond registration mark. . . <i>J. &</i> <i>J. MAYER</i>	E.A. & S.R. Filley, St. Louis, Mo., were importing ironstone from England during 1845-60 (cf. DeBarthe 1979:75); this example made for them by T.J. & J. Mayer, Burslem, in business 1843-55 (Godden 1964: 424; 1972:14-15)	impressed registration mark dates 9/2/1851 (parcel no. = 4, day of month = 2, registration refers to vessel form rather than to pattern) (Cushion 1980:175); see Plate 7n
26	ww plate	tp, lt & med blue, incomp scroll motif that probably framed the pattern name	unidentified	not photographed
30	i saucer	tp, black, incomp coat of arms & diamond registration mark w/ <i>T.J.</i> <i>& J. MAYER/DALE</i> <i>HALL POTTERY./</i> <i>Longport IMPROVED</i> <i>BERLIN IRONSTONE;</i> impressed NS to lower left of mark	T.J. & J. Mayer, Dale Hall, Burslem, 1843-55 (Godden 1964:424; 1972: 14-15)	printed registration mark may refer to molded interior vessel design (parcel no. 4), dates to 12/15/1849, 4/4/1850 or 10/9/1854 (Cushion 1980: 175); see Plate 8j
31	ww/tn i saucer	tp, green, oval w/. . . <i>LEY/J. & G. MEAKIN./</i> <i>ENGLAND.</i>	see vessel 11	1880- ; see Plate 8h

TABLE 15. (continued)

Catalog number	Vessel description	Backmark description	Manufacturer and dates of company	Remarks
32	i saucer	tp, black, incomp coat of arms w/. . .NE CHINA/. . .D below w/impressed . . .WHITE	unidentified British mark	see Plate 6p
33	i saucer	tp, black, incomp, traces of coat of arms w/ALFRED MEA. . .TUNSTALL/ ENGLAND	see vessel 10	see Plate 8d
34	i saucer	tp, black, coat of arms w/ IRONSTONE CHINA/ ALFRED MEAKIN./ ENGLAND.	see vessel 10	not photographed
42	ww/i saucer	tp, lt & med blue, scroll motif w/partial pattern name, STONE. . .above	unidentified	see Plate 8p
48	ww saucer	impressed circle (incomp), w/dots around it, inner inscription unclear	unidentified	not photographed
49	ww shallow bowl/ saucer	tp, brown, coat of arms w/PORCELAINE DE TERRE/TRADEMARK, JOHN EDWARDS/ ENGLAND; impressed 161 to upper right of mark	John Edwards & Co., King St., Fenton, 1847-1900 (Godden 1964:231)	John Edwards & Co. used printed marks ca. 1880-1900 (Godden 1964:231); set w/vessel 67; see Plate 8k
51	ww cup	hp, red, crosshatch	unidentified	workman's mark; see Plate 6f
67	ww footed serving bowl	see vessel 49	see vessel 49	same mark as on vessel 49 (Plate 8k)
81	ww plate	hp, brown, . . .ON w/ flourish below	unidentified	not photographed
94a	ww plate/saucer	impressed, *	unidentified	not photographed
94c	i plate/saucer	tp, black, incomp coat of arms motif	unidentified	same mark as on vessel 94d (Plate 6m)
94d	i plate/saucer	see vessel 94c	unidentified	same mark as on vessel 94c (Plate 6m)
94e	i plate/saucer	tp, black, incomp coat of arms motif w/IRONS . . .G. MEAK. . . / . . .LEY	see vessel 11	1880- ; same mark as on vessel 11 (Plate 8g)
94f	i plate	see vessel 13	unidentified	1840- (Godden 1964: 552); see Plate 6i
94g	i plate	tp, black, incomp coat of arms motif w/. . .DLE, ELLIOT & SO. . .impressed 64 below mark	Liddle, Elliot & Son, Dale Hall Pottery, Longport 1862-71 (Godden 1964:235)	see Plate 8m

Vessels 54, 94b, h, i, and j have fragmentary backmarks.

hardpaste porcelain. Six show elaborate molding and paneling—forms popular in heavy ironstone, especially between 1850 and 1860 (figures 21e-f, 22a-d). Four are of a hardpaste porcelain decorated with more subdued low-relief floral and abstract motifs (Figure 23a, c). By 1880 this style of delicate relief decoration was quite popular.

Only the pre-1840 assemblage at Mappin-Murphy has a higher percentage of transfer-printed wares—28% versus 27%. Perhaps the popularity of transfer-printed vessels with the site occupants overshadowed that of contemporary shell-edge wares. Transfer-printed vessels at Smith-Gosney occur in a wide variety of colors (plates 1i; 2a-b). All are whitewares except for two flow blue pearlware examples. The most popular colors are

medium and light blue (6%), brown and green (4% each), and cranberry (3%). Minor colors include flow blue, medium and dark blue, two-tone, black, and purple.

Handpainted floral decoration occurs on 14% of the vessels and includes several examples (all of whiteware except for one of ironstone) of the broadline and sprig styles (5%) (popular 1840-60), thick line (2%), and thin line (3%). Underglaze/overglaze-decorated softpaste porcelain vessels account for the remaining 4% of the floral-decorated subclass. Other handpainted vessels include those with border-lined/banded decoration (3%) and annular/dipped decoration (5%) (Plate 4a, f).

It is difficult to separate this mixed assemblage into discrete time periods. The number of ceramics from

TABLE 16.
Frequencies and Percentages of Vessels by Decorative Class from the Smith-Gosney Site

Class	Number of vessels	Percentage of assemblage	Remarks	Class	Number of vessels	Percentage of assemblage	Remarks
Transfer printed				Floral			
Raised				Nonpainted/ nontransfer printed	6	6.3	1 ww, 1 ww/i, 4 i
Blue				Other			
Medium and light	1	1.0	ww	Handpainted	11	11.5	4 ww, 2 pw, 3 i, 2 sp
Cranberry	2	2.0	1 ww, 1 tk ww	Nonpainted/ nontransfer printed	6	6.3	1 ww, 1 ww/i, 4 i
Nonraised				Subtotal	27	29.1	
Black	1	1.0	ww	Handpainted (nonraised)			
Blue				Floral			
Flow	2	2.0	pw	Broadline	1	1.0	ww
Medium and dark	2	2.0	ww	Overglaze/ underglaze	4	4.2	sp
Medium and light	5	5.2	3 ww, 2 ww/i	Sprig	4	4.2	ww
Brown	4	4.2	3 ww, 1 tk ww	Thick line	2	2.0	1 tk ww, 1 i
Cranberry	1	1.0	ww	Thin line	3	3.1	1 ww, 2 sp
Green	4	4.2	ww	Border lined/ banded	3	3.1	2 ww, 1 brown paste
Purple	1	1.0	ww	Annular/slip banded	5	5.2	ww
Two-tone	2	2.0	ww	Subtotal	22	22.8	
Subtotal	25	25.6		No decoration except body molding	2	2.0	1 p, 1 sp
Decal				No decoration	19	19.8	4 ww, 13 i, 2 yw
Nonraised				Total	96	99.3	
Other	1	1.0	ww				
Edge decorated (raised)							
Shell							
Handpainted	2	2.0	ww				
Nonpainted/ nontransfer printed	2	2.0	ww				

Smith-Gosney is higher than those from the other sites, and the distribution of ceramics was essentially uniform across the excavated area (Figure 16). If we assume that the site was occupied on a more or less continuous basis from ca. 1840, the changing proportions of ceramics representing discrete time units during the nineteenth century form the basis for some interesting propositions.

Over one-quarter of the Smith-Gosney assemblage is composed of transfer-printed vessels—a decorative class whose popularity began to wane rapidly after 1860. Shell edge and related edge-decorated wares also were popular prior to 1860, but here they only represent approximately 6% of the vessel assemblage. According to Miller (1980:3-4), these types of edge-decorated wares were some of the most inexpensive ceramics available with decoration. The next highest cost level included vessels with simple painted decoration such as sprig and broadline floral. This decorative class also is underrepresented at Smith-Gosney relative to the other sites that have mixed assemblages with long time spans. Of the decorated earthenwares, those with transfer-printed decoration represent the highest cost level. Since

they are more abundant in the assemblage than are handpainted or edge-decorated vessels, we suggest there may have been differences in status and/or purchasing power between the occupants of the Smith-Gosney site and the other contemporary sites discussed here, at least for the period up to 1860 and possibly even later.

The post-1860 ceramics from Smith-Gosney are similar to those found at Mappin-Vaughn. Characteristic of that period are the undecorated ironstones and the nonpainted edge-decorated styles on thick ironstones (elaborate press-molded edges, etc.), on thinner ironstones, and on whitewares (more delicate foliate and abstract designs). The majority of the backmarks at both sites are from British companies. It is curious that only 1% of the Smith-Gosney vessels have decal decoration, compared to 9% at Mappin-Vaughn. One would not expect such a large percentage at Mappin-Vaughn, since decalomania remained a minor decorative method until the late 1920s (Jacobs 1983:22; Kovel and Kovel 1983:138-39), well after the abandonment of both sites.

SUMMARY AND CONCLUSIONS

The analysis of historical ceramics from five sites in the central Salt River valley of northeast Missouri had three major goals: (a) description and classification of the ceramics, (b) assessment of the manufacturing and transportation histories of the ceramics, and (c) assessment of the differences among the excavated assemblages and of the possible relationships between assemblage composition and social rank. Each goal is discussed below in light of the results of the analysis.

CLASSIFICATION AND CHRONOLOGY

The first step in the procedure was to devise a ceramic classification constructed from units that could be applied in a straightforward manner by specialist and nonspecialist alike. Concurrently, the classification had to embody enough information to reflect the realities of nineteenth- and early twentieth-century ceramic manufacturing and merchandising. Most archaeological classifications of historical ceramics are grounded in the ware concept. We discovered that although ware is a useful device for classifying eighteenth-century ceramics, it is inadequate when used alone to classify those from the nineteenth century. Knowledge of technological advancements in the ceramic industry during the 1800s forced us to view changes in paste and glaze composition as a continuum rather than as a series of discrete changes. In addition, nineteenth-century ceramics were marketed primarily by type of decoration. In our analysis ware assumes a secondary role to decoration.

Description of the ceramic taxonomy in Chapter 3 provides a backdrop for a detailed discussion of the major classes popular during the nineteenth century. A number of decorative classes, such as transfer-printed vessels, several varieties of raised and nonraised hand-painted vessels (e.g., shell-edge and related edge decoration and various floral styles), and annular/slip-banded vessels reached peak popularity during the antebellum period. We attempted to resolve inconsistencies in identifying these decorative classes by standardizing terminology and by suggesting ways to eliminate ambiguities among various classes and subclasses.

Following the Civil War ceramic tastes began to change and a wide variety of decorative classes became available. Few of these classes, including decal decoration and nonpainted high- and low-relief edge decoration,

have been discussed adequately in the archaeological literature, and we have tried to discuss them in detail here. Since many historical sites in the Midwest have occupational histories that span large portions of the 1800s as well as the early 1900s, historical archaeologists cannot dismiss postbellum ceramics as inconsequential simply because they have not as yet been classified in a manner useful to archaeological analysis.

An intersite comparison of the percentages of vessels by decorative class (Table 17) provides a framework for developing a basic chronological sequence of ceramic types for the Cannon region. Although this sequence is based on data from five sites in a single locality—the Smith settlement—the sequence probably has broad applicability to historical sites throughout Missouri, especially in areas along the Mississippi and Missouri rivers and their tributaries. All but two assemblages are quite mixed (the exceptions being the pre-1840 sealed deposit at Mappin-Murphy and the Mappin-Vaughn deposit) and span long periods of time. However, consideration of the percentages of certain decorative classes, in combination with data from backmarks, allows us to construct tentative temporal boundaries for site components (Chapter 4).

The earliest assemblage is from the sealed deposit at Mappin-Murphy, dating ca. 1828-40. The Samuel H. Smith and Harvel Jordan sites were first occupied during this period, and the earliest occupation at the Smith-Gosney site occurred ca. 1840. This early period is characterized by almost equal percentages of the three major decorative classes—transfer-printed vessels, edge-decorated vessels, and handpainted vessels. Although the period 1820-40 was one of peak production of blue underglaze transfer-printed wares, the pre-1840 inhabitants of Mappin-Murphy preferred cranberry transfer-printed wares by a margin of four to one. Only in the Smith-Gosney and Samuel H. Smith assemblages were shades of blue slightly more prevalent than cranberry. By the 1840s the entire spectrum of underglaze transfer colors, including flow blue and two-tone combinations, were present at the Cannon sites. Small amounts of flow blue were present at all sites except Mappin-Murphy pre-1840 and Mappin-Vaughn, and were deposited during the years 1840-60.

The assemblage from Mappin-Vaughn, dating ca. 1865-95, illustrates the postbellum shift away from transfer-printed ceramics. Several colors date to earlier

TABLE 17.
Percentages of Vessels by Decorative Class
in the Six Excavated Assemblages

Decorative Class	Site					
	Mappin-Murphy pre-1840	Mappin-Murphy outside pre-1840	Mappin-Vaughn	Samuel H. Smith	Harvel Jordan	Smith-Gosney
Transfer printed						
Black		1.5	2.2	1.5	1.9	1.0
Blue						
Flow		3.6		.8	4.3	2.0
Medium and dark	2.4	1.5			1.9	2.0
Medium and light	2.4	1.5	2.2	7.7	3.1	6.3
Brown		.7	2.2	1.5	1.8	4.2
Cranberry	21.4	5.8	2.2	6.2	5.6	3.1
Green		1.5		1.5	.6	4.2
Purple	4.8	5.8				1.0
Rust			2.2		.6	
Two-tone		.7		.8		2.0
Decal						
Floral		2.2	8.8	3.8	6.9	
Other						1.0
Edge decorated						
Shell						
Handpainted	14.3	7.3		6.9	6.8	2.0
Nonpainted/nontransfer printed		2.9			1.2	2.0
Floral						
Handpainted				1.5	1.2	
Nonpainted/nontransfer printed		5.8	13.3	6.2	1.2	6.3
Other						
Handpainted	9.5	10.2		3.1	1.9	11.5
Nonpainted/nontransfer printed	4.8	2.9	13.3	.8	9.9	6.3
Handpainted						
Floral						
Broadline	2.4	2.2		6.2	2.6	1.0
Sprig	4.8	2.2		7.7	8.0	4.2
Tea leaf			2.2		.6	
Thick line	2.4	2.9	4.4	.8	1.9	2.0
Thick and thin line	7.1	4.4		6.9	5.6	
Thin line		2.2		3.1	3.1	3.1
Underglaze/overglaze	9.5	1.5		.8		4.2
Border lined/banded		4.4	6.6	10.8	8.7	3.1
Sponge/spatter				3.1	3.1	
Annular/slip banded	7.1	3.6		3.8	3.1	5.2
Slip glazed		1.5	4.4	.8	1.9	
Other				4.6	3.1	
No decoration except body molding	2.4	3.6	6.6	3.1	5.0	2.0
No decoration	4.8	17.5	26.6	6.9	4.3	19.8

in the century (including medium and light blue, cranberry, black, and brown) and probably are from vessels purchased prior to occupation of the house. One vessel has a rust-colored transfer print done in a completely different, more open floral accent style than that seen on earlier examples, where the entire border and

interior and/or exterior of a vessel are covered with the transfer-printed design.

Edge-decorated vessels were popular throughout the nineteenth century, and all the assemblages exhibit similar percentages of this decorative class. However, percentage variations within the class yield several sets

of reliable horizon markers. The three sites first occupied during the 1830s—Mappin-Murphy, Samuel H. Smith, and Harvel Jordan—all contain high percentages of blue and green shell edge and similar embossed-edge whitewares. By the 1850s this decorative style was being replaced by unpainted vessels (frequently in ironstone) with molded, raised floral designs (including vines, fronds, and leaves), often in combination with molded lip ridges and/or bosses. From 1850 to 1860 elaborately molded and paneled forms were popular in heavy ironstone. By 1880 heavy ironstones generally were left completely undecorated, and thinner earthenwares (usually whiteware but occasionally ironstone) were decorated in a more subtle variant of the raised floral style. Artistic movements such as Art Nouveau and Art Deco appear to have influenced this decorative style from the 1880s into the early twentieth century.

High percentages of handpainted vessels displaying simple floral motifs occurred in several assemblages and can be placed with reasonable certainty in the antebellum period. The most diagnostic subclasses are the broadline and sprig floral styles on whiteware and the underglaze/overglaze floral styles on softpaste porcelain. Thick-and-thin-line floral decoration was also quite common. Most handpainted floral motifs were done in bright shades of blue, black, green, and red, though pastels and earthen shades also were used. Annular/slip-banded whitewares, primarily in earthen tones but also in brighter colors, appear to have enjoyed a long popularity, occurring at all sites except Mappin-Vaughn. Spatter decoration, in colors identical to those used in sprig floral decoration, occurs sporadically in the antebellum portions of the assemblages. Sponge decoration should be considered separately from spatter decoration and actually dates after ca. 1860. The use of handpainting as a decorative method became much less common after the Civil War, except for the tea-leaf luster motif used on ironstones, extremely popular between ca. 1880 and 1900.

Postbellum nineteenth-century ceramics are characterized either by a lack of decoration (on ironstone) or by the use of nonprinted relief decoration as a border or vessel-body accent (on thinner whitewares and ironstones). Although ceramics with handpainted or transfer-printed decoration generally were less popular after the Civil War, another technique—decal decoration—was used in many of the same contexts beginning ca. 1880. It began as a very minor class but by the 1830s was one of the most popular decorative methods used on American earthenwares.

Although mixed deposits at all sites except Mappin-Murphy date well into the 1900s, it is difficult to characterize adequately the assemblages from that era. One might expect to find substantial numbers of twentieth-century ceramics mixed in with earlier ma-

terials. Curiously, this is not the case. Only a few decorative classes, such as decalcomania and certain nonpainted edge-decorated ironstones and whitewares, can be dated securely to the post-1900 era.

One explanation for the scarcity of twentieth-century materials might be a dramatic difference between nineteenth- and early twentieth-century refuse disposal patterns. For example, garden plots, low areas in yards, and latrines may have been choice locales for the disposal of later materials, which would be in marked contrast to the earlier pattern of disposing refuse around and under the houses. Since our excavations were limited to areas in and around the residences, later trash dumps (and probably some earlier ones) were not located.

Up to this point in our discussion of reliable temporal markers, we have stressed only those decorative classes that occur with some regularity. Two additional types of ceramics (not true classes in the sense used here)—yellow ware and Rockingham—occur rarely in the assemblages, but their low frequency of occurrence may nonetheless be instructive. British and American-made Rockingham was produced throughout most of the nineteenth century. Yellow ware was made in England as early as the 1700s but was not introduced to the United States until the 1820s, when it soon became an important component of American pottery manufacturing. The small amount of Rockingham in the Cannon assemblages might be explained by the fact that Rockingham was a type of slip glaze used more frequently on ornamental pieces than on tableware. If the Cannon settlers owned Rockingham pieces, the latter probably were handled rarely and were thus less likely to break. That such low quantities of yellow ware were found at the site is curious, since it was an inexpensive utilitarian earthenware.

In their analysis of nineteenth-century ceramics from Nebraska, Steinacher and Carlson (1978) never found more than 5% yellow ware in an assemblage. Usually the percentages were much less. In her report on Ozark-border sites dating ca. 1810-70, Price (1979) does not even mention yellow ware. We tentatively conclude that the lack of certain classes of ceramics, in particular American-produced wares, is a result of the almost total dominance of the ceramic market by British products until at least the end of the Civil War. An examination of the distribution of ceramic backmarks by date and company affiliation supports this proposition.

TRADE AND TRANSPORTATION

The temporal ranges of the identifiable manufacturers' marks found at the five sites suggest that British ceramic products monopolized the marketplace until late in the nineteenth century. Although it is true that many American wares were not marked, or if they were the marks

employed were similar to British marks (as an attempt to capitalize on the selling power of British ceramics), we believe the data accurately portray the nineteenth-century mercantile situation. Parallel evidence from the assemblage summaries supports this contention. Most major decorative classes such as transfer printing, shell-edge and related embossed-edge decoration, and many of the handpainted styles are known to be almost exclusively of British manufacture.

It is not surprising that the inhabitants of the area used primarily British-produced pottery. It generally was lower priced, better made, and more easily obtained than were the products of contemporary European and American potters. As mentioned previously, the center of the English pottery industry was Staffordshire (Figure 20). Based on U. S. Department of Commerce records (1915), there were more than 300 individual potteries in the six towns known as "The Potteries"—Tunstall, Burslem, Hanley, Stoke, Fenton, and Longton. In the 1850s the Staffordshire potteries exported more than one-third of their wares to the United States (Godden 1972:7), and by the early 1900s the figure had risen to "90% of their best wares" even given a series of restrictive tariffs (U. S. Department of Commerce 1915:394).

Many of the families that settled the central Salt River valley were from the Bluegrass region of Kentucky. During the early nineteenth century, inhabitants of the Bluegrass region were participating in an international trade system that imported manufactured goods from England by way of Philadelphia and shipped agricultural products to the South down the Ohio and Mississippi rivers. Mason (1984:91) notes that early Salt River settlers probably expected to participate in a similar system in Missouri as soon after arrival as possible. Early trade and transportation along the Salt River were facilitated by the construction of roads connecting the region with Mississippi River ports and by the development of towns and villages that acted as redistribution points for incoming goods. Many merchants who emigrated to Missouri from Kentucky probably continued to favor Baltimore and Philadelphia as their wholesale purchasing centers, though by the 1840s the pull of New York began to affect buying patterns (Atherton 1971:83).

The Smith settlement was located near major roads that provided easy access to the towns of Palmyra, Florida, and Paris. By 1840 there were seven stores in Florida and six in Paris (Mason 1984:24). Atherton (1971:52, 59) notes that a typical frontier store was a general shop that carried groceries and staples, hardware, leather goods, dishes, drugs, books, and dry goods. The frontier period of merchandising was characterized by retailers who were separated by great distances from the wholesaler on which they relied. As a rule, only one large order was purchased each year, which necessitated

large capital outlays and substantial risk. Three basic options for procuring goods were available to the retailer: (a) many storekeepers (at least one-third) traveled east to buy from wholesalers in person, risking the dangers of river transport; (b) local wholesalers sprang up to act as middlemen between the large Eastern importers and/or wholesalers and the frontier retailers; or (c) jobbing companies developed to take a merchant's order and fill it (Atherton 1971:67-71).

Heavy imported goods such as ceramics and metal items were moved more efficiently by water routes. By 1830 the steamboat dominated river transportation and for the two following decades was the most important agency of internal transport in the country. For the most part, turnpikes and canals acted as feeders rather than as effective competitors, and railroads did not become a serious threat until the 1850s (Taylor 1951:58).

St. Louis had a unique potential for development as a mercantile center in the Midwest, being located on the only line of transportation to the regions along the upper Missouri and Mississippi rivers and their major tributaries such as the Illinois and Red rivers (Atherton 1971:95; Taylor 1951:64). During the 1840s and 1850s a tremendous growth in steam navigation occurred in the region controlled by St. Louis as a wholesaling center. Wholesalers either traveled directly to the East to buy large supplies of goods at auction in the ports of Philadelphia or New York, or directly from established European contacts. Often, businesses concentrated on one line of goods. Many small retailers could not afford to make a trip east to purchase their goods and were served by St. Louis wholesalers. Even those who traveled to make an entire year's purchases found they could not remember everything and throughout the year had to pay higher prices in St. Louis to replace critical items (Atherton 1971:71, 95-97).

Several examples of ironstone imported by the St. Louis firm of E. A. and S. R. Filley were found at the Cannon sites, as well as at the Smith Mansion Hotel in Nauvoo, Illinois (DeBarthe 1979:75). The Filleys were in business from 1851 to 1860 and during part of that time were importing ceramics on contract from the firm of T. J. and J. Mayer of Dale Hall, Burslem—in business from 1843 to 1855. A Chauncey Filley from St. Louis also was importing British wares ca. 1856 (backmarked vessel in author's collection). Several Chauncey Filley marks were reported from the Nebraska collections examined by Steinacher and Carlson (1978)—one from the territorial town of DeSoto and another from a cistern near the Kennard house in Lincoln. Wills and Manning was another import firm based in St. Louis. Ironstone with their mark has been found at Zumwalt's Fort near St. Charles, Missouri (Waselkov 1979:71).

The years 1847-54 saw a transportation and communication revolution in America (Chandler 1965:137-38).

By 1854 railroad lines had opened from Pittsburgh and Wheeling to Cincinnati and Louisville, and to St. Louis by 1857. Before the end of the decade, steamboat passenger traffic on the Ohio was seriously reduced and freight rates had to be slashed drastically. Steamboat travel and trade were kept alive somewhat longer on the upper Mississippi River and its tributaries as railroads brought hordes of settlers and briefly stimulated river trade. The era of frontier merchandising was nearly at its end. Although British goods would still figure significantly in the import market, their dominance was being challenged by a number of factors, including the development of American industry and competition from other European manufacturing countries (Chandler 1965:141; U. S. Department of Commerce 1915). Retailers in the upper Mississippi region and in areas along its tributaries no longer had to rely on yearly purchases from the East; they could order shipments as needed for delivery by rail (Atherton 1971:98).

Ceramic evidence from the Cannon sites and from contemporary sites in the Mississippi and Missouri river drainages supports the above characterization of the antebellum frontier merchandising system. One result of this system was the widespread distribution of British ceramics; it is no accident that antebellum assemblages from many areas of the Midwest appear relatively homogeneous (cf. Price 1979:41). The same major classes of ceramics appear repetitively from site to site, albeit with some variation in percentages. For example, the illustrated ceramics from the southeast Missouri sites reported by Price (1979), and vessels from the Hyrum Smith site and Smith Mansion Hotel latrine in Nauvoo, Illinois (DeBarthe 1979; Waselkov *et al.* 1975), are identical to many items in the Cannon assemblages.

In addition to similarities in decorative classes among assemblages from the Midwest, there is a widespread distribution of British company marks. It is clear, however, from examining the distribution of individual company marks that merchants in various regions of the Midwest dealt exclusively with a few potteries or with middlemen who represented only a few potteries. For example, Price (1979) reports few marks among the earthenwares from the southeast Missouri sites she examined. The few that were present were from British firms, especially the Davenport and Clews factories. These marks were not found in the Cannon assemblages, where the companies represented most frequently were the various Meakin potteries and T. J. and J. Mayer. Despite this regionalism in mark distribution, the ceramic decorations are remarkably similar, again pointing out that the British potteries knew exactly what American consumers wanted and mass-produced the items for quick sale.

Although the British monopolized the pottery trade well into the twentieth century, the postbellum period

witnessed a slight respite from the near-stranglehold the British works enjoyed during prior periods. American companies began making inroads into some geographic regions after the Civil War, and we begin picking up American-made wares in Cannon assemblages dating to this period. The marks are primarily from companies located in the core ceramic-producing area of the Midwest centered in and around East Liverpool, Ohio, such as the Edwin M. Knowles China Co., McNicol Pottery Co., Sevres China Co., and W. S. George. Products from many of these companies made their way as far west as Fort Robinson in Nebraska, probably by way of St. Louis. Although St. Louis lost some of its position as a major wholesaling center after the advent of the railroad, it almost certainly maintained some importance as a major distribution center for items from major production areas such as East Liverpool, relying on networks set up during the commercial heyday of the city.

The presence of marks in the Cannon assemblages that belong to smaller American potteries, such as the Peoria Pottery Co., Peoria, Illinois, and the Crown Pottery Co., Evansville, Indiana, points to the much wider range of products being marketed in postbellum times. This increased variety in type of wares, as well as in the points of origin, makes it difficult to provide a comprehensive taxonomy of historical ceramics found after the Civil War, even though the more easily classified products of British ceramic manufacturers figured importantly on the scene until the early 1900s. During the years 1906-13, the percent of total British ceramic exports to the United States declined from 24% to 12% (U. S. Department of Commerce 1915:392). By that time, large quantities of inexpensive German pottery were being exported to the United States, further complicating the ceramic picture at early twentieth-century sites.

MATERIAL CULTURE AND INDICATIONS OF STATUS: CA. 1830-60

The material remains found at sites along the Salt River belong to a frontier system called the upper South culture, brought by many of the early settlers of the project area when they emigrated from the Bluegrass region of Kentucky. This cultural pattern was based on corn and hog production and on wood-oriented technology. It emphasized acquisition of land and slaves as a means of gaining social status, i.e., becoming a member of the rural landed gentry. Groups often immigrated as interdependent, interrelated units (O'Brien 1984:270); the Smith settlement was one of those units.

Otto (1977:91-92) notes that there are two ways of predicting status based on differences in ceramic as-

semblages. One could excavate a number of sites with the hope of demonstrating a pattern, or one could use documentary evidence to establish the status of site inhabitants before comparing the ceramics. The latter approach is appropriate here, since documentary evidence has shown (O'Brien 1984:286-88) that the distribution of wealth within the Smith settlement is remarkably consistent. Families there were, on average, wealthier than families in the McGee settlement to the south but not as wealthy as families in the Poage settlement to the north. None of the families that occupied the five excavated sites owned slaves, though several (e.g., Samuel H. Smith and Eliza Mappin) owned substantial quantities of land.

Households with varying degrees of wealth immigrated to the Salt Valley. Upon arrival, the effects of being able to purchase relatively inexpensive land on household net wealth were twofold: (a) the formerly landless became landowners, creating a substantial middle class, and (b) those that were already wealthy became wealthier (O'Brien 1984:276). The inhabitants of the Smith settlement became members of this middle class, and we believe that their struggle for affluence is reflected in their homes as well as in their portable objects such as ceramics.

Status comparisons based on ceramic assemblages ideally are made between contemporary unmixed deposits dating to short time spans. Although not all the Cannon assemblages fit these requirements exactly, we believe that a comparison of the percentages of the major decorative classes present at Mappin-Murphy (pre-1840 deposit), Samuel H. Smith, Harvel Jordan, and Smith-Gosney provides useful insights.

In his analysis of the differences among ceramic vessels belonging to the planter/owner, overseer, and slaves at Cannon's Point Plantation, Georgia, Otto (1977:102) found significant differences in the percentages of several decorative classes represented. Transfer-printed flatware constituted 74% of the total vessel assemblage from the planter's kitchen. In contrast, transfer-printed tableware made up less than 40% of the totals at the slave and overseer sites. Blue- and green-edged flatware, underglaze handpainted flatware, and undecorated flatware together accounted for less than 20% of the total at the slave cabin and 54% of the total at the overseer's house. These data correlate well with the price categories established by Miller (1980:3-4) for the major nineteenth-century ceramic decorative groups discussed in Chapter 2. To reiterate, the categories (in ascending order by price) are: (a) undecorated wares; (b) minimally decorated wares (shell and related edge, spatter and sponge decoration, and annular/slip banded); (c) simple handpainted wares; and (d) transfer-printed wares. Miller does not treat porcelain in his scheme,

though Jacobs (1983:5) places it on a level above transfer-printed wares.

At the Cannon sites (Table 17), the percentages of transfer-printed vessels range from 20% at Harvel Jordan to 28% at Mappin-Murphy (pre-1840 deposit). Shell-edge vessels range from a low of 4% at Smith-Gosney to a high of 14% at Mappin-Murphy (pre-1840 deposit), and vessels with handpainted decoration range from 14% at Smith-Gosney to 26% at Mappin-Murphy (pre-1840 deposit). Otto (1977:98) found high percentages of vessels with banded decoration at the slave cabin and the overseer's house, as opposed to extremely low percentages at the planter's kitchen. In the Cannon assemblages values range from 3% at Harvel Jordan to 7% at Mappin-Murphy (pre-1840 deposit).

In Otto's sample, percentages of oriental and European porcelain are low and fairly constant: planter's kitchen—2%, overseer's house—3%, and slave cabin—2% (Otto 1977:106). He notes that the appearance of porcelain at eighteenth-century sites generally is believed to be a reliable indicator of status differences (cf. G. Stone 1970; Teller 1968). At nineteenth-century sites the relative percentages of transfer-printed earthenwares in an assemblage replace porcelain as status indicators. It is possible that access to high-quality porcelain was equally limited for slave, overseer, and planter alike.

The lack of oriental and European porcelain (if indeed Otto means continental European porcelain as opposed to British [softpaste] bone china) is not surprising at Cannon's Point Plantation, given its dates of occupation (1794-1866) (Otto 1977:92). During those years, English bone china was exported to the United States on a much greater scale than was continental European or oriental porcelain. It is hard to believe that bone china is completely absent from the Cannon's Point assemblages, if we consider that in the partially contemporary Cannon assemblages the percentages of English softpaste porcelain (probably bone china) are substantial. One possible reason for this dichotomy is that Otto did not differentiate between bone china and highly vitrified earthenwares.

The substantial differences in the percentages of ceramics found at Cannon's Point Plantation and in the Smith settlement probably have a great deal to do with basic social and economic differences in the cultural traditions represented at the sites. Some of the differences may be related either to dissimilar regional preferences or to dissimilar retail and wholesale marketing strategies, and others may be grounded in functional variability. For example, some of the decorative classes used by the inhabitants of the Cannon sites are clearly more domestically oriented, such as the edge-decorated wares, the annular/slip-banded wares, and some of the simple handpainted wares, which do not normally occur as sets. Other decorative classes, including transfer-

printed earthenwares and underglaze/overglaze hand-painted softpaste porcelains, came in sets. The breakage rate of transfer-printed vessels was high enough to allow this category to represent at least 20% of each of the early assemblages, and it is safe to assume a high use-rate for these wares. The middle-class inhabitants of the Smith settlement probably dined regularly on their transfer-printed dinnerware and participated in regular tea drinking. Many decorative classes appear almost exclusively as tea sets, including underglaze/overglaze handpainted floral decoration on softpaste porcelain, and bright polychrome sprig decoration on whiteware. The accoutrements of the tea ceremony obviously were available in all price ranges, which suggests that it was a custom that cross-cut several social classes.

Without excavated materials from other settlements we cannot make interarea comparisons between families in the Smith settlement and their poorer and/or richer neighbors. However, we suspect that the major differences would lie in the percentages of transfer-printed wares. It appears that the entire range of British wares available for sale during the 1830-50 period in the area is represented at the Smith settlement sites, though further documentary research is necessary to confirm if certain higher-status items were available but simply were not

purchased by the inhabitants of the sites under study here. It also is possible that isolated higher-cost items such as hardpaste porcelain vessels or decorative items were purchased, but that they were curated and rarely became part of the archaeological record.

The data summarized here suggest that the occupants of the Smith settlement sites experienced a relatively rapid and parallel rise to middle-class status. The results of analysis of the Harvel Jordan site (located on the edge of the Smith settlement) suggest that even though the inhabitants of that site were not part of the original group of interdependent settlers making up the settlement, they attained similar status.

Ceramic artifacts dating to the antebellum period (ca. late 1820s-1860) in the Cannon region and in nearby regions are remarkably homogeneous in point of origin (almost totally British) and in the variety of decorative classes present. This conclusion points to the necessity of using a consistent and reliable scheme for classifying ceramics. The system of decorative attributes we have employed is very useful. Refinement of our system for later nineteenth- and early twentieth-century decorative classes awaits further documentary and archaeological research.

APPENDIX I:

Summary Data on the Ceramic Assemblages

MAPPIN-MURPHY PRE-1840

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
Decorated					
Raised design					
Handpainted					
Shell edge	12b	2	plate	sc	ww, blue
	13	4	plate	sc	ww, blue; see Plate 3h
	15	8	plate	sc	ww, blue
	20	11	plate	sc	pw, green; see Plate 3c
	21	6	plate	sc	pw, green
	173	5	plate	sc	ww, green; see Plate 3b
Other edge	1	16	plate	rc	ww, cord & hanging fern/ tassel, blue; see Plate 3i
	4	7	plate	rc	ww, dot & plume, blue; see Plate 3f (see also Price 1979:44-45)
	5	6	plate	?	ww, see vessel 4
	6b	2	plate	rc	ww, dot & plume, blue
Nonpainted/nontransfer printed					
Other edge	77	1	saucer	rc	sp, indet raised design
	174	1	saucer	rc	ww, abstract
Nonraised design					
Transfer printed					
Blue					
Medium and dark	25	11	plate	sc	ww, abstract border & floral
Medium and light	86	11	cup	rc	ww, abstract border & scenic; set w/vessel 59
Cranberry	56	21	plate	rc	ww, floral
	85	18	cup	rc	ww, floral & abstract
	94	8	cup	rc	ww, abstract floral & floral
	149	7	cup	?	ww, scenic
	152	3	plate	?	ww, scenic cathedral motif; see Plate 7j for backmark
	155a	8	cup	?	ww, scenic, floral & cross- hatch
	155b	9	plate	?	ww, scenic & floral
	155c	5	saucer	?	ww, scenic & floral
	155d	4	cup	?	ww, scenic & floral
Purple	101	1	cup	rc	ww, ext scenic; int abstract border & floral
	126	6	wash pitcher	?	pw, floral w/hp green ac- cent (oglz); molded handle w/flange
Handpainted					
Floral	52	38	small plate	rc	sp, tk & tn ln, yellow (oglz), rust, black & white (uglz)
	58	11	saucer	rc	ww, tn ln border stripe, black w/tk & tn ln sprig, green, red & black

MAPPIN-MURPHY PRE-1840 continued

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
	62	3	saucer	rc	ww, tk & tn ln floral, blue
	88	11	cup	rc	ww, tk & tn ln sprig, black, red, green w/int tn ln border stripe, black (see Price 1979:62-63 for an identical piece)
	89	22	cup	rc	ww, tk ln floral, med & dk blue
	95	4	cup	rc	sp, tk & tn ln floral & dot, mauve pink (uglz) & yellow (oglz); molded vessel shape
	97a	2	cup	?	sp, indet floral, yellow (oglz); set w/vessels 97b, 139
	97b	1	saucer	sc	sp, indet floral, yellow (oglz); set w/vessels 97a, 139
	129	18	cup	rc	ww, tk & tn ln floral, med & dk blue
	158a	1	saucer	rc	sp, tk ln floral, red & gold
	159b	2	saucer/plate	?	ww, broadline style, brown & pink
Annular/slip banded	121	27	bowl	rc	ww, green rouletted lip band; black & white dots, brown, white & blue swirl motif & gray splotches on earthen yellow background; see Plate 4b
	123	15	bowl	rc	ww, brown stripes & blue bands on white background; earthen yellow & white swirl motif on blue; see Plate 4k
	125	9	bowl	?	ww, dk brown bands & stripes, earthen yellow & rust stripes & gray band on white background
No decoration except body molding	141	2	sugar bowl	rc	p
Undecorated	51	10	platter	rnc	tk ww
	147	3	bottle?	rc	yellow ware

^a Does not include miscellaneous sherds, which are grouped with those from the area outside the pre-1840 context.

MAPPIN-MURPHY, OUTSIDE PRE-1840

Class	Vessel number	Number of sherds	Vessel form	Lip form	Remarks
Decorated					
Raised design					
Transfer printed					
Purple	23	1	plate/platter	rc?	ww, tp floral w/hp green & yellow accent; molded rim; see Plate 2f
	28	21	plate	sc	ww, tp abstract floral border, w/abstract & floral below; molded rim; see Plate 2c
Decal					
Floral	33	5	plate	sc	tk ww, raised floral border w/gold edge; decal in green, orange & white on peach background
Handpainted					
Shell edge	8	3	plate	rc	ww, blue
	9	10	plate	rc	ww, blue
	10	2	plate	sc	ww, blue
	11	4	plate	sc	ww, blue; see Plate 3c
	12a	1	plate	sc	ww, blue
	14	1	plate	sc	ww, blue
	16	2	plate	sc	ww, blue
	17	4	plate	sc	ww, blue
	19	4	plate	sc	pw, green
	172	4	plate	sc	pw, green
Other edge	2	2	plate	rc	ww, cord & hanging fern/tassel, blue
	3	10	plate	rc	ww, cord & hanging fern/tassel, blue
	6a	1	plate	sc	ww, dot & plume, blue
	7	12	plate	sc	pw, shell edge w/molded floral motifs at irreg intervals, blue
	18	8	plate	rc	ww, cord & hanging fern/tassel, green; see Plate 3a
	22	3	saucer	sc	ww, abstract and floral rim, flow blue (uglz) & gold accent (oglz); see Plate 3j
	37	8	plate/platter	rc	ww, cord; int & ext slip-glazed yellow; int tk & tn ln floral, gray, green & black; probably a continental European import rather than British (R. Bray, pers. comm.)
	54	2	bowl	rc	sp, molded rim; tk & tn ln floral, bright green, blue, red & pink
	61	1	saucer	rc	sp, molded rim; tk & tn ln floral, green (oglz), black & pink (uglz)
	70	1	shallow bowl	sc	ww, molded lip; tn ln border stripe, gold
	72	2	saucer	sc	sp, molded lip

MAPPIN-MURPHY OUTSIDE PRE-1840 continued

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
	100	1	cup	sc	ww, molded lip; tk ln floral, green
	119	5	serving bowl	sc	ww, molded rim w/gold accent
	135	12	bowl	sc	i, tk ln scroll w/lt yellow slip-glaze on parts of vessel; outflaring rim
Nonpainted/nontransfer printed					
Shell edge	30	14	plate	rc	ww
	31	32	plate	rc	ww
	32	3	plate	rc	pw?
	47	2	plate	rc	i, irregular shell edge
Floral edge	39	1	plate	sc	ww, boss & floral
	41	4	plate	rc	i
	49	2	saucer	sc	ww
	65	2	saucer	sc	ww, see Plate 7i for back-mark
	66	1	saucer	sc	ww
	71	1	saucer	rc	i
	137	3	pitcher	?	ww, boss & floral motif on shoulder; molded vessel shape
	161	6	bowl/pitcher	?	ww, vine & floral on vessel ext
Other edge	40	2	plate	rc	i, molded lip
	43	5	plate	sc	ww, molded rim
	45	12	plate	rc	i, molded rim
	46	1	plate	rc	i, molded lip & rim
Nonraised design					
Transfer printed					
Black	99	1	cup	?	ww, cup well, abstract & floral
	106	1	cup	rc	ww, int & ext hp tk & tn ln border stripes; ext scenic tp; see Plate 1e
Blue					
Flow	163b	1	saucer	rc	ww, abstract
	163c	4	cup	?	ww, floral
	163d	3	saucer	?	ww, indeterminate design
	170a	2	cup	rc	ww, floral
	171	3	plate	rc	ww, indeterminate & floral design
Medium and light	59	22	saucer	rc	ww, abstract border & scenic; set w/vessel 86; see Plate 1d ww, scenic w/dendritic branch
	130	5	cup	?	ww, abstract border & floral; see Plate 1b
Medium and dark	24	8	plate	rc	ww, floral border & scenic
	163a	4	saucer	?	ww, floral w/hp pink, yellow & green accent
Brown	53	2	sm shallow dish	rc	ww, scenic kneeling cherub speaking to swan motif; set w/vessel 27; see Plate 2c
Cranberry	26	8	sm plate	?	ww, see vessel 26
	27	4	sm plate	?	

MAPPIN-MURPHY OUTSIDE PRE-1840 continued

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
Green	29	8	plate	sc	ww, floral
	93	1	cup	rc	ww, abstract border; scenic ext, floral int
	148	3	plate/saucer	sc	ww, abstract border
	150	4	plate/saucer	?	ww, scenic
	151	4	plate	?	ww, abstract dendritic floral border & scenic
	155c	6	saucer	?	ww, floral
	67	1	saucer/plate	rc	ww, abstract & floral border; see Plate 1h
	157	1	?	?	ww, floral
	105	1	cup	rc	ww, int & ext abstract border w/ext scenic
	136	3	cup	?	ww, scenic
	144	4	lg basin/bowl/pitcher	rc	tk ww, abstract border & floral
	145	1	lg bowl/basin	?	tk ww, abstract border w/hp lt blue accent & floral tp below border; see Plate 2h
	153	1	plate	?	ww, scenic; see Plate 2g
	154	1	bowl	?	tk ww, scenic
	160	2	cup	rc	ww, int indeterminate design, red; ext scenic w/word. . . for, green
Decal					
Floral	34	1	sm plate	?	sp, decal in lavender, yellow & lt green
	104	1	plate/saucer	rc	ww, decal in pastel orange, yellow & blue-green; hp tn ln abstract rim motif, gray & gold
Handpainted					
Floral	35	2	cup	rc	ww, int & ext tn ln border stripe; ext floral, metallic blue-gray, khaki green, orange (uglz) & yellow (oglz)
	36	1	plate/platter	snc	ww, tk ln floral, pink & rust (uglz) w/green (oglz)
	44a	1	plate	rc	ww, stenciled tn ln dendritic branch & floral, lt brown w/gold accent; set w/vessel 44b
	44b	2	saucer	rc	ww, stenciled tn ln dendritic branch & floral, lt brown w/gold accent; set w/vessel 44a
	55	2	saucer	rc	sp, broadline style?, rust, yellow, pink & metallic pink, dk & lt green; set w/vessels 87a, 87b; see Plate 5h
	57a	1	plate	?	ww, tk & tn ln sprig, green, blue & black set w/vessels 57b, 57c

MAPPIN-MURPHY OUTSIDE PRE-1840 continued

Class	Vessel number	Number of sherds	Vessel form	Lip form	Remarks
	57b	5	saucer	sc	ww, see vessel 57a
	57c	1	cup	?	ww, molded rim; see vessel 57a
	60	5	plate	rnc	ww, molded rim; tk & tn ln border stripes & tk ln floral, black
	63	18	saucer	rc	ww, tk & tn ln floral, blue
	64	3	saucer	?	pw, tk & tn ln floral, brown
	87a	5	cup	rc	sp, see vessel 55
	87b	1	saucer	rc	sp, see vessel 55
	90	1	cup	rc	ww, tk ln floral, dk blue; see Plate 6a
	91	5	cup	rc	ww, tk ln border stripe & tk ln floral, dk blue
	103	2	bowl?	rc	ww, tn ln border stripe & floral, flow blue
	109	2	cup	rc	ww, both surfaces burned, probably tk & tn ln floral, dk blue
	127	2	pitcher	?	ww, tk & tn ln floral, blue-green
	131	2	saucer/plate	?	sp, tk & tn ln floral, rust & green
	139	3	sugar bowl	sc	sp, molded vessel shape; layered indeterminate floral, faded green, yellow, pink & brown/gold; set w/vessels 97a, 97b
Border lined/banded	159a	2	cup	?	ww, tk ln floral, green, yellow & brown
	68	1	saucer	rc	ww, int tn ln border stripe, red; set w/vessel 107
	69	1	plate	rc	i, tk ln border stripe, brown luster
	79	1	saucer	rc	ww, tn ln border stripe, gold
	107	4	cup	rc	ww, int & ext tn ln border stripe, red; set w/vessel 68
	108	1	cup	rc	ww, tn ln border stripe, gold
Annular/slip banded	146	1	bowl/pitcher	rc	ww, tn ln border stripe, gold
	122	17	bowl	?	ww, brown stripes on white background; med blue, earthen yellow & white swirl motif on lt blue background
	124	3	bowl	rc	ww, green rouletted raised dot pattern; blue & dk brown bands on white background; see Plate 4i
	132	3	cup/bowl	?	ww, black mocha design on earthen yellow background w/blue over design

MAPPIN-MURPHY OUTSIDE PRE-1840 continued

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
Slip glazed	137	4	cup/bowl	rc	ww, green rouletted chevron design; blue band on white background
	156	2	bowl	?	ww, powder blue bands & stripes on white background; see Plate 4g
	133	8	?	?	Rockingham slip-glaze over creamy paste
	134	4	bowl?	?	redware, w/dk brown high-luster lead glaze int & ext
No decoration except body molding	81	1	saucer	rc	ww, burned
	96	6	cup	rc	i
	98	5	cup	sc	ww
	118	1	cup	sc	ww
Undecorated	140	1	sugar bowl	rc	i
	38	21	plate	rc	yellow ware
	42	19	plate	rc	i
	48	1	plate	sc	ww
	50	1	plate	rc	i
	73	1	saucer	sc	ww
	74	1	saucer	sc	i
	75	1	saucer	rc	i
	76	2	saucer	rc	ww
	78	1	saucer	rc	i
	80	1	saucer	rc	sp
	82	2	saucer	rc	i
	83	1	saucer	rc	ww
	84	1	saucer	sc	ww
	102	1	cup	rc	i
	110	1	cup	rc	i, all surfaces burned
	111	3	cup	?	sp
	112	2	cup	rc	i
	114	4	bowl	rc	i
	115	3	serving bowl	rc	i, see Plate 8f for backmark
	116	1	plate/saucer	?	pw?
	117	5	plate	?	tk ww
	120	22	wide-mouthed container	rc	yellow ware
	142	1	covered dish	?	sp
	143	8	pitcher	?	tk ww, base

^a Does not include miscellaneous sherds of decorated softpaste porcelain (2 body sherds, 1 basal sherd, 1 handle, and 1 fragment of a knick-knack) and undecorated softpaste porcelain (14 rim sherds and 5 body sherds); undecorated pearlware (1 rim sherd, 14 body sherds, and 18 basal sherds); decorated whiteware/ironstone (9 rim sherds, 6 body sherds, and 2 handles) and undecorated whiteware/ironstone (94 rim sherds, 301 body sherds, 188 basal sherds [8 of which are backmarked], and 3 handles); and 445 small fragments. Miscellaneous sherds from the pre-1840 context are included in these counts.

MAPPIN-VAUGHN

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
Decorated					
Raised design					
Nonpainted/nontransfer printed					
Floral edge	7	16	saucer	sc	i, set w/vessels 13, 16; see Plate 8c for backmark
	11a	10	plate	rc	i, molded vessel shape
	12a	2	plate	rc	i
	13	61	plate	sc	i, set w/vessels 7, 16
	16	4	shallow bowl	?	i, set w/vessels 7, 13
	33b	1	bowl	rc	i
Other edge	11b	1	saucer	rc	ww, tn ln scroll
	12b	4	plate	rc	i, cord, tassel & scallop
	12c	1	saucer/plate	rc	i, molded lip
	30	1	bowl	sc	i, plume & dot
	33c	1	saucer	rc	ww, traces of feathery design
	33d	1	cylindrical vessel	rc	i, molded lip
Nonraised design					
Transfer printed					
Black	25	6	cup	rc	ww, scenic, hp accent strokes over motif, green & yellow; see Plate 1f
Blue					
Medium	4	47	cup	rc	ww, floral
Brown	35b	1	saucer	?	ww, floral
Cranberry	33e	1	cup	?	ww, scenic
Rust	21	12	saucer	rc	ww, floral; set w/vessel 28
	28	3	cup	rc	ww, floral; set w/vessel 21
Decal					
Floral	14	4	plate	?	sp, decal in yellow, green & red; set w/ vessel 15
	15	4	saucer	sc	sp, see vessel 14
	34a	1	saucer	?	ww, decal in greenish blue
	34b	1	saucer/plate	?	ww, decal in green, red & yellow
Handpainted					
Floral	9	16	plate	rc	ww, tk ln floral, flow blue
	26	3	cup	rc	i, ext tk ln border stripe, luster brown; set w/vessels 19, 33a
	35a	1	saucer	?	ww, tk ln floral, green
Border lined/banded	19	3	wash pitcher	sc	i, int & ext tn ln border stripe, luster brown; set w/ vessels 26, 33a
	24	30	container	?	yellow ware, ext brown band
	33a	1	saucer/plate	?	i, int tk ln border stripe, luster brown; set w/vessels 19, 26
Slip glaze	31	6	?	?	Rockingham slip-glaze over buff paste
	32	1	ornamental vessel?	?	soft ww, heavy brown-lead glaze
Nonpainted/nontransfer printed					
	2	7	cup	rc	ww, molded pedestal
	17	1	cup	?	i, molded vessel shape
	23	4	cup	?	ww, molded vessel shape; set w/vessel 27a, b
	27a	4	cup & saucer	?	ww, see vessel 23

MAPPIN-VAUGHN Continued

Class	Vessel number	Number ¹ of sherds	Vessel form	Lip form	Remarks
Undecorated	1	7	cup	rc	i
	3	7	cup	rc	i
	5	12	saucer	rc	i, see Plate 60 for backmark
	6	5	saucer	rc	i
	8	7	saucer	rc	i
	10a	4	plate	rc	i
	10b	2	plate	rc	i
	18	3	bowl/saucer	?	i
	20a	2	cylindrical vessel	rc	i
	20b	30	sugar bowl	rc	i
	22	9	saucer/plate	?	i, see Plate 8a for backmark
	29	1	cup	rc	i

¹Does not include miscellaneous sherds of undecorated whiteware/ironstone (32 rim sherds, 99 body sherds, 29 basal sherds [14 of which are backmarked], and 3 handles) and 138 small fragments.

SAMUEL H. SMITH

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
Decorated					
Raised design					
Transfer printed					
Green	51	1	saucer	sc	ww, raised floral border w/floral tp below
Decal					
Floral	111	18	plate	sc	ww, rim bosses; decal in green, pink, blue, orange, red & yellow
Handpainted					
Shell edge	67	7	plate	sc	ww, green; see Plate 3d
	68a-h	49	plates	sc	ww, blue
Floral edge	8	10	bowl	sc	sp, raised floral rim & body; hp floral, pink, green, yellow & blue
	9	9	plate/saucer	sc	sp, raised floral edge w/ molded scalloped rim, hp lt pink accent
Other edge	70	22	plate	sc	ww, molded rim; hp tn ln border stripe & tk ln floral, flow blue; see Plate 4j
	11	1	ceramic box?	rnc	p, raised & molded surface w/hp floral, purple, lavender & green
	112	5	saucer	rc	ww, molded lip; hp indet design, metallic green
	113	7	bowl	sc	ww, abstract rim w/metallic orange & green rim, lip & base int floral
Nonpainted/nontransfer printed					
Floral edge	5	11	plate	sc	ww, set w/vessel 6
	6	11	plate	sc	ww, set w/vessel 5
	14	7	cup	rc	sp, rose & stem motif
	18	2	bowl/saucer	sc	ww, set w/vessel 19
	19	2	plate/saucer	sc	ww, set w/vessel 18
	22	5	saucer	sc	sp, see Plate 8c for backmark
	24	3	saucer	sc	i
	25	3	serving bowl/ deep platter	rnc	i
Other edge	4	4	saucer	rc	ww, vertically ribbed rim; see Plate 7h for backmark
Nonraised design					
Transfer printed					
Black	79	5	plate	?	ww, abstract
	87	12	plate	?	ww, abstract floral border & scenic; see Plate 2i
Blue					
Flow	107	8	cup/bowl	?	ww, scenic & floral
Medium and light	90	5	saucer	rc	ww, floral border & scenic; set w/vessels 91-93; see Plate 1c
	91	2	saucer	rc	ww, floral border, see vessel 90
	92	3	cup	rc	ww, floral border & scenic, see vessel 90

SAMUEL H. SMITH continued

Class	Vessel number	Number ^d of sherds	Vessel form	Lip form	Remarks
	93	5	cup	rc	ww, floral border, see vessel 90
	94	5	saucer	?	ww, floral
	95	7	plate	sc	ww, floral border
	96	13	plate	sc	ww, abstract floral border & scenic
	97	4	saucer	?	ww, scenic
	98	13	cup	rc	ww, floral & dendritic branch; hp broad accent strokes on floral designs, green & red
	99	2	plate/saucer	?	ww, scenic
Brown	88	17	plate	sc	ww, floral border & scenic; see Plate 1j
	89	22	plate	?	ww, floral border & scenic
Cranberry	72	9	cup	sc	ww, floral & abstract; molded vessel shape; set w/vessel 73
	73	16	saucer	?	ww, floral & abstract; molded vessel shape; set w/vessel 72
	74	10	saucer	?	ww, floral & abstract
	75	26	plate/saucer	?	ww, floral & scenic
	76	26	plate	sc	ww, floral & scenic
	77a	11	saucer	rc	ww, abstract floral & scenic
	77b	1	cup	?	ww, abstract floral
	78	2	saucer	sc	ww, scenic & abstract
Green	101	2	plate/saucer	?	ww, scenic; see Plate 1g
Two-tone	80	3	saucer	?	ww, border w/scenic, green & abstract floral, cranberry
Decal					
Floral	49	1	saucer	?	ww, decal in blue, green & brown
	106	1	plate	sc	ww, decal in blue, yellow, pink & green; molded border; see Plate 5i
	109	6	plate	rc	ww, tn ln border stripe, gold, w/alternating border design, decal in dk & med blue, gold, green, pink, orange & red; molded vessel shape
	110	1	plate/saucer	?	sp, decal in green, pink & yellow
Handpainted					
Floral	12	1	cup	?	sp, hp green; molded vessel shape
	28	3	cup	rc	ww, broadline style, med & dk blue & red
	29	2	cup	?	ww, broadline style, med & dk blue & red; see Plate 5d
	30	1	pitcher spout	n/a	ww, broadline style, dk blue

SAMUEL H. SMITH continued

Class	Vessel number	Number of sherds	Vessel form	Lip form	Remarks
	31	9	saucer	rc	ww, broadline style, dk blue, red, black & green
	32	4	cup	?	ww, broadline style, dk blue, red, black & green
	33	1	cup	rc	ww, tk & tn ln sprig, black, green & red; see Plate 5c
	36	3	saucer	sc	sp, tk ln border stripe, rust orange w/fern & floral below, mauve pink
	39	2	saucer	rc	ww, tk & tn ln sprig, green & red
	40	1	sugar bowl	rc	sp, tk & tn ln floral, pink & blue
	41	1	cup	rc	ww, tk & tn ln sprig, pink & blue
	42	2	cup	rc	ww, tk & tn ln sprig, green & blue; set w/vessel 43
	43	2	saucer	?	ww, tk & tn ln sprig, green & blue; set w/vessel 42
	44	2	saucer	?	ww, tn ln floral, blue
	45	3	cup	?	ww, tk & tn ln sprig, green & black
	46	1	cup	sc	sp, tk & tn ln floral, pink, green & red; molded vessel shape
	47	2	cup	rc	sp, tk ln floral (oglz), yellow, red & green
	48	1	saucer	sc	sp, border stripe & tn ln floral stencil (?), blue, rust & green; molded vessel shape; see Plate 5f
	50	1	saucer	?	sp, tk & tn ln floral, green, black & red
	53	2	cup	?	ww, tk & tn ln sprig, green, red & black; set w/vessels 54-56
	54	3	saucer	?	ww, see 53 above
	55	3	cup	rc	ww, tk & tn ln sprig, green, red, blue & black; molded vessel shape; set w/vessels 53, 54, 56
	56	3	saucer	?	ww, tk & tn ln sprig, green, red, black & blue; set w/vessels 53-55
	58	2	cup	sc	sp, tk & tn ln floral, blue, green, orange & red (oglz); molded vessel shape; see Plate 5g
	59	2	cup	sc	sp, tk & tn ln floral, orange, red, yellow, pink & green; molded vessel shape
	66	2	cup	rc	ww, int tn ln border stripes, brown & blue, w/int & ext tk & tn ln floral & dot, brown

SAMUEL H. SMITH continued

Class	Vessel number	Number ^d of sherds	Vessel form	Lip form	Remarks
Other	71	1	cup	?	ww, tk ln floral, flow blue w/traces gold accent
	81	2	saucer	rc	ww, broadline style, med & dk blue
	100	3	plate/saucer	?	ww, broadline style w/ border stripe, dk green
	102	4	saucer	rc	ww, broadline style w/ border stripe, dk green
	105b	1	saucer	rc	ww, tn ln border stripe, black, w/tn ln floral, green
	115	9	plate	sc	ww, raised border w/tn ln border stripe & abstract floral, gold
	37	1	cup	rc	ww, tk & tn ln scenic border, blue, pink & orange
	38	1	plate/saucer	sc	ww, tk & tn ln scenic border motif, pink, green & red
	52	2	saucer	rc	sp, molded vessel shape, traces of hp, orange
	105a	1	cup	rc	ww, int & ext tn ln border stripe, black, w/ext traces red paint
Border lined/banded	114	2	cup	rc	ww, indeterminate design, gray
	124	10	ornamental vessel	?	p, molded vessel shape w/ hp bright blue on stylized floral parts of design
	7	18	plate	rc	ww, tn ln border stripe, gray or faded gold gilt w/ single hp rose motif on rim, black, blue, pink, yellow & green; see Plate 80 for back-mark
	64a	2	cup	rc	i, tk ln border stripe, luster brown
	64b	1	cup	rc	i, tk ln border stripe, luster brown
	82a	2	bowl	?	redware, ext bright yellow enamel background w/dk & metallic brown bands, int white
	82b	3	cup	?	redware, ext green background w/metallic brown band & floral design, int white
	103	2	cup	rc	ww, tn ln border stripe, green
	104	2	saucer	rc	ww, tn ln border stripe, green
	108a	6	saucer	rc	ww, tn ln border stripe, red
	108b	3	cup	rc	ww, int & ext tn ln border stripe, red

SAMUEL H. SMITH continued

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
	116	13	plate	rc	ww, tk ln border stripe, gold; set w/vessels 117-119, 121
	117	2	saucer	rc	see vessel 116
	118	1	cup	rc	see vessel 116
	119	3	bowl	rc	see vessel 116
	121	7	cup	rc	see vessel 116; plain handle
Sponge/spatter	60	10	cup	rc	ww, int tn ln border stripe, red; ext spatter, green & red; see Plate 5a
	61	3	saucer	rc	ww, spatter, green & red
	62	5	saucer	rc	ww, spatter, green & red
Annular/slip banded	63	20	plate	sc	ww, spatter, red
	69	1	bowl/crock	rc	ww, molded lip; green bands below
	83	7	bowl	?	ww, dk blue, earthen yellow & dk brown bands w/ brown & white swirl design on bright blue & white background
	84	2	bowl	?	ww, green and dk brown stripes on white & earthen yellow background
	85	7	bowl	?	ww, rust brown stripes w/ dk brown/earthen brown & white swirl design on white & bright blue background
	86	17	bowl	rc	ww, dk brown & bright blue stripes, zigzag & semi-circle annular design on white background; see Plate 4c
Slip glazed	123	7	vase	sc	ww, int & ext green; molded vessel shape
No decoration except body molding	10	1	?	?	sp
	15	5	cup	sc	sp
	16	5	cup	sc	ww
Undecorated	125	1	cup	rc	milk glass
	1	3	cup	rc	ww
	2	5	cup	rc	ww
	3	3	cup	rc	ww
	27	43	plate	rc	i
	65a	5	plate	?	yellow ware
	65b	3	plate	?	yellow ware
	120	3	cup	rc	ww
	126	5	cup?	rc	milk glass, blue
	129	1	plate	?	ww

^a Does not include miscellaneous sherds of decorated softpaste porcelain (8 rim sherds) and undecorated softpaste porcelain (18 rim sherds and 14 body sherds); undecorated pearlware (1 body sherd and 1 basal sherd); and decorated whiteware/ironstone (39 rim sherds, 13 body sherds, and 1 handle) and undecorated whiteware/ironstone (129 rim sherds, 963 body sherds, and 110 bases [23 of which are backmarked]).

HARVEL JORDAN

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
Decorated					
Raised design					
Transfer printed					
Brown	13	5	plate	rc	ww, tp abstract Art Deco style outline border motif, brown w/pink & green hp fill-in; molded rim; see Plate 5j
	33	1	plate	sc	ww, rim bosses & abstract floral tp, molded vessel shape; see Plate 1e
Decal					
Floral	2	18	bowl	sc	ww, alternating border design—rose decal in pink, red, green & yellow and raised trellis motifs; see plates 5k and 7c for backmark
	20	27	sm plate	rnc	ww, molded lip & rim, gold accent; rose decal in red, green, blue & black
	146	7	plate	sc	ww, raised border, decal in lt green & lt blue
	149	4	plate	snc?	ww, decal in purple/rose, pink & lt green
Handpainted					
Shell edge	49	7	plate	sc	ww, blue
	50	7	plate	sc	ww, blue
	51	3	plate	rc	ww, blue
	52	1	bowl	sc	ww, blue
	53	3	plate	rc	ww, unglazed surface, blue; set w/vessel 56?
	55	4	plate	sc	ww, blue
	56	3	plate	rc	ww, unglazed surface, blue; set w/vessel 53?
	57	7	platter	snc	ww, blue
	58	2	plate	sc	ww, blue
	60	17	plate	sc	ww, green
	61	2	plate	sc	pw, green
Floral edge	54	9	plate	sc	ww, scroll & frond, blue
	84	4	sm plate/saucer	sc	ww, raised boss & floral w/tn ln border floral, gold; set w/vessel 85
Other edge	32	1	plate	?	tk ww, discontinuous floral border w/tn ln branch floral, rust
	59	1	platter	rc	ww, cord & tassel, green
	95	2	cup	?	ww, raised double crossed-lin motif on vessel body w/ gold accent w/in lines & metallic lt green outside lines
Nonpainted/nontransfer printed					
Shell edge	78	3	plate	rc	ww
	80	6	plate	rc	ww
Floral edge	77	4	plate	sc	ww

HARVEL JORDAN continued

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
Other edge	81	2	plate/saucer	sc	ww, boss & floral
	10	2	cup	rc	ww, Art Deco style, set w/vessel 11
	11	5	cup	rc	ww, Art Deco style, set w/vessel 10
	47	6	plate	sc	ww, 8 evenly spaced abstract motifs
	73	1	bowl	sc	p, Art Deco style, see Plate 6c
	74	1	plate	sc	ww, Art Deco style, see Plate 6d
	75	2	plate	sc	ww, stylized flute & vine w/vertical raised lines
	76	8	plate	sc	ww, Art Deco style
	79	1	plate	?	ww, Art Deco style border accent
	82	6	plate	sc	ww, cord
	83	1	saucer	rc	ww, Art Deco style
	85	1	sugar bowl	sc	ww, boss & tn ln border, set w/vessel 84?
	91	1	cup	rc	ww, Art Deco style
	92	1	plate	rc	i, abstract
	93	1	plate	rc	i, molded lip
	94	1	plate	?	i, abstract
	105	1	wash pitcher	?	i, pedestal w/bosses, molded vessel shape; see Plate 7m for backmark
Nonraised design					
Transfer printed					
Black					
	29	5	plate	?	ww, border floral & scenic
	34	2	cup	?	ww, floral
	104	2	cup	rc	ww, writing, 2 grps of 4 lines visible: . . . NS/. . . eds n. . . /f. . . at liv. . . /f. . . & . . . hope
Blue					
Flow					
	14	10	plate	rc	ww, abstract border & lg floral
	108	4	plate	rc	ww, stylized floral on white
	109	29	cup	rc	ww, int & ext abstract border & floral, ext also has dot & floral motif; set w/vessel 110
	110	52	saucer	rc	ww, abstract border w/ floral & dot motif below; set w/vessel 109
	112	4	plate	rc	ww, abstract border & floral
	113	10	plate	rc	ww, abstract floral border w/metallic sheen
	114	3	saucer	rc	ww, abstract border & floral w/metallic sheen
Medium and dark					
	70	18	plate	rc	ww, abstract floral
	71a	35	plate	rc	ww, oak leaf & acorn motif; see Plate 1a
	111	6	cup	?	ww, dot & floral on white

HARVEL JORDAN continued

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
Medium and light	8	18	plate	sc	ww, scenic willow; molded lip; see Plate 8i for backmark
	9	3	plate	?	ww, scenic willow
	21	30	plate	rc	ww, abstract & floral
	102	2	plate/platter	snc	ww, floral
	107	7	saucer	rc	ww, abstract floral & scenic
	28	3	plate/saucer	rc	ww, abstract border & floral
	37	15	cup	rc	ww, floral
	38a	12	saucer	rc	ww, abstract & floral; set w/vessel 38b
	38b	1	cup	rc	ww, abstract & floral; set w/vessel 38a
	39	1	plate	?	ww, floral
	40a	10	cup	rc	ww, floral; set w/vessel 40b
	40b	9	saucer	rc	ww, floral; set w/vessel 40a
	41	4	cup	?	ww, floral
	42	1	plate	?	ww, scenic cow & barn motif
	43	6	plate	?	ww, scenic cathedral motif; same as Mappin-Murphy vessel 152
	36	1	cup	?	ww, scenic
	31	1	saucer/plate	?	ww, abstract floral
	3	4	saucer	rc	ww, tn ln border stripe, blue & decal in green, yellow, red, pink & blue
	22	1	cup	rc	ww, tn ln border stripes (1 at rim, other 2 cm down, discont. around main motif) w/decal in lt blue, green, orange, plum & pink, molded vessel shape
	35	1	saucer	?	ww, faded decal, color(s) not present
	142	1	plate	?	ww, decal in pink, brown & green; see Plate 7f for backmark
Green Rust Decal Floral	144, 150	10	covered serving dish	rc	sp, cover—ext decal in pink & green, int unglazed; handle—molded w/traces gold paint; dish—ext decal in green, yellow & rose
	151	4	plate	?	sp, decal in lt green & purple/rose
	152	4	cup	?	sp, decal in lt green, yellow, rust, rose & blue
	1	4	cup	rc	i, int & ext border stripe w/ext tea leaf motif, luster brown; see Plate 6b
	27	2	cup	rc	sp, tn ln border stripe & stenciled (?) floral motif, gold

HARVEL JORDAN continued

Class	Vessel number	Number ^d of sherds	Vessel form	Lip form	Remarks
	30	1	saucer	rc	ww, stenciled brown tn ln outline w/partial fill-in near lip; see Plate 1k
	46a	5	saucer	rc	ww, tk & tn ln sprig, bright green, pink, red & black; set w/vessel 46b
	46b	1	cup	?	ww, tk & tn ln sprig, bright green & black; set w/vessel 46a
	71b	2	cup	?	ww, tk & tn ln sprig, black, green, blue & red; molded vessel shape; see Plate 5c
	72	1	saucer	rc	ww, tk & tn ln sprig, green, blue & black
	99	2	saucer	rc	ww, tk ln border stripe, green, w/stenciled abstract floral motifs below, gold
	103	2	saucer	rc	p, tk & tn ln floral, pastel blue, green & pink
	117	18	cup	rc	ww, tk & tn ln sprig, blue, rust & yellow
	118	7	saucer	rc	ww, tk & tn ln sprig & dot, red & dk green; set w/vessel 119
	119	5	cup	rc	ww, tk & tn ln sprig & dot, red & dk green; set w/vessel 118
	120	34	saucer	rc	ww, tk & tn ln sprig, blue, black, red, lt green & pink; w/vessel 121
	121	16	cup	rc	ww, tk & tn ln sprig, blue, black, red & lt green; set w/vessel 120
	122	8	saucer	?	ww, tk & tn ln sprig & dot green, red & black; set w/vessel 123
	123	9	cup	rc	ww, tk & tn ln sprig, black, red & green; set w/vessel 122
	124	3	cup	rc	ww, tk & tn ln sprig, blue, pink & green; molded vessel shape
	125	2	cup	?	ww, ext tk ln border stripe, dk green w/tk & tn ln floral below, dk green & blue; set w/vessel 126
	126	7	saucer	rc	ww, tk ln border stripe, blue w/tk & tn ln floral, dk green & black; set w/vessel 125
	127	4	saucer	rc	ww, tn ln border stripe, black w/broadline style, red

HARVEL JORDAN continued

Class	Vessel number	Number of sherds	Vessel form	Lip form	Remarks
	128	6	cup	rc	ww, tk ln border stripe, blue w/broadline style, red & blue; set w/vessel 129
	129	30	saucer	rc	ww, tk ln border stripe, blue w/broadline style, red & blue; set w/vessel 128
	130	7	cup	rc	ww, tk ln border stripe, dk blue w/tk & tn ln floral & dot, dk blue
	131	6	saucer	rc	ww, tk ln border stripe, dk blue w/tk & tn ln floral & dot, dk blue & rust
	133	7	saucer	rc	ww, tk ln border stripe, dk blue w/tk & tn ln floral, med & dk blue
	134	7	saucer	rc	ww, tk ln border stripe, med blue w/tk & tn ln floral, med blue
	136	1	cup	rc	ww, tk ln floral & dot, med & dk blue, w/blue wash over all; set w/vessel 137
	137	6	saucer	rc	ww, tk & tn ln floral & dot, med & dk blue, w/blue wash over all; set w/vessel 136
	138	2	saucer	rc	ww, tk ln border stripe, dk blue w/tk ln floral, dk blue
	139	4	cup	rc	ww, tk ln border stripe, dk blue w/broadline style, med & dk blue
	140	32	saucer	rc	ww, tn ln border stripe, dk blue w/tk & tn ln floral, med & dk blue & yellow
	145a	3	cup	?	ww, tn ln floral, lt blue; set w/vessel 145b
	145b	2	saucer	sc	ww, tn ln floral, lt blue & lt green w/gold lip accent; set w/vessel 145a
	147	4	saucer	sc	ww, tk & tn ln sprig, dk green, pink & black
	148	3	?	?	sp, ext. stenciled floral motif, purple & lt green on white w/shaded lt blue & gray around motif
Other	18	1	cup	rc	ww, double tn ln border stripes w/single abstract motif in between, med blue
	100	1	cup	rc	ww, stenciled abstract border, gray
	143	13	saucer	rc	sp, double tn ln border stripes, brown w/pale yellow fill-in & tn ln abstract motif, green w/discont. floral motifs, pink & green

HARVEL JORDAN continued

Class	Vessel number	Number of sherds	Vessel form	Lip form	Remarks
Border lined/banded	155a	1	sugar bowl/creamer	?	sp. tn ln abstract motif, black & red above tk ln border stripe, metallic yellow
	155b	1	teapot spout	?	sp. tn ln abstract motif, pink/rose
	7	11	saucer	rc	ww, double tk & tn ln border stripes, gold
	15	1	wash pitcher	rc	i, int & ext tk ln border stripe, luster brown w/ molded vessel shape
	16	5	plate	rc	ww, tn ln border stripe, faded gold/blue
	17	1	plate	rc	tk ww, tk ln border stripe, gold; set w/vessel 19
	19	2	plate	rc	ww, tk ln border stripe, gold; set w/vessel 17
	23	3	saucer	rc	ww, double tn ln border stripes, gold
	24	1	saucer	rc	ww, double tk & tn ln border stripes, gold
	25	2	bowl	rc	ww, tk ln border stripe, gold
	26	1	saucer	?	sp, tn ln border stripe above saucer well, gold
	62	3	cup	rc	ww, tk ln border stripe, blue; between two tn ln border stripes, red; set w/ vessel 63; see Plate 4c
	63	4	saucer	rc	ww, tk ln border stripe, blue, between two tn ln border stripes, red; set w/ vessel 62
	132	3	saucer	rc	ww, tk ln border stripe, dk blue
	135	2	saucer	rc	ww, tk ln border stripe, dk blue
	153	1	?	?	rw, int tk ln brown metallic stripe on white; ext tk ln brown metallic stripe on yellow
Sponge/spatter	44a	3	cup	?	ww, ext tn ln floral motif, red w/spatter, green & red; set w/vessel 44b
	44b	8	saucer	rc	ww, tk ln floral, red & blue w/spatter, green, red & blue; set w/vessel 44a
	45a	13	cup	rc	ww, int & ext sponge, blue; set w/vessels 45b, c; see Plate 5b
	45b	11	saucer	rc	ww, int sponge, blue; set w/vessels 45a, c
	45c	1	plate	?	ww, int sponge, blue; set w/vessels 45a, b

HARVEL JORDAN continued

Class	Vessel number	Number ¹ of sherds	Vessel form	Lip form	Remarks
Annular/slip banded	66	4	cup	rc	ww, dk brown tk & tn ln border stripes & earthen brown & white swirl motif on gray & rust background; see Plate 4d
	67	4	cup	rc	ww, metallic brown tk ln border stripe w/yellow highlights, tk blue border band, tk brown stripe & green band
	68	5	cup/bowl	?	ww, rust & white swirl motif on bright blue background
	69	3	bowl	?	ww, partial brown stripe over green rouletted bands
	106	16	bowl	rc	ww, dk brown w/yellow highlights & bright blue tk ln border stripes on white & blue background
Slip glaze	12	3	bowl	rc	milk glass, poured molded shape w/peach pink ext
	115	1	bowl/vase	rc?	ww, int & ext dk flow blue w/metallic sheen
	116	5	cup	rc	ww, int & ext dk flow blue w/metallic sheen
No decoration except body molding	4	12	serving bowl	sc	ww, molded vessel shape; see Plate 8n for backmark
	86	3	cup	rc	i, molded vessel shape
	87	1	cup	sc	i, molded vessel shape
	88	2	cup	sc	i, molded vessel shape
	89	1	cup	sc	i, molded vessel shape
	90	1	plate	rc	i, molded vessel shape
	97	5	sugar bowl	?	tk i, annular base w/molded border; ext molded vessel shape
	141	12	plate	rc	milk glass, molded horizontal bands from lip to base int
	5	3	saucer	rc	i
	6	3	plate	rc	ww, see Plate 7a for backmark
Undecorated	48	9	plate	rc	i
	98	7	platter	rc	ww
	101	9	? w/pedestal	?	ww
	154	1	?	?	yellow ware
	156	1	sugar bowl	rc	i

¹ Does not include miscellaneous sherds of decorated softpaste porcelain (1 rim sherd and 1 handle) and undecorated softpaste porcelain (11 rim sherds, 33 body sherds, 2 basal sherds, and 2 handles); undecorated pearlware (27 body sherds); decorated whiteware/ironstone (15 rim sherds, 235 body sherds, and 2 handles) and undecorated white ware/ironstone (165 rim sherds, 936 body sherds, 141 basal sherds [12 of which are backmarked], and 2 handles).

SMITH-GOSNEY

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
Decorated					
Raised design					
Transfer printed					
Blue					
Medium and light	24	5	plate	sc	ww, rim bosses & abstract border tp
Cranberry	70	1	pitcher	sc	tk ww, floral rim design on deeply scalloped lip & floral tp; see Plate 2a
	87	2	saucer	sc	ww, rim bosses & floral border tp
Handpainted					
Shell edge	1	46	plate	rc	ww, blue
	2	89	plate	rc	ww, blue
Other edge	3	5	plate	sc	pw, cord & vertical her-ringbone, blue; see Plate 3g
	4	7	plate	sc	pw, cord & fishscale, blue
	6a	18	plate/platter	snc	i, molded rim, tiow blue (uglz), red & gold (oglz) border w/tk & tn ln hp below (Gaudy Ironstone in "Blinking/Seeing Eye" pattern); set w/vessels 6b, 6c; see Plate 4l
	6b	2	saucer	rc	ww, see vessel number 6a
	6c	1	cup	?	ww, see vessel number 6a
	49	40	shallow bowl/ saucer	sc	ww, abstract edge, gold & green w/floral decal/tp w/ hp fill-in below, yellow, pink & green; set w/vessel 67; see Plates 4h and 8k (backmark)
	54	6	cup	rc	ww, abstract edge, gold; molded vessel shape & handle, notched pedestal
	63	3	cup	rc	sp, abstract edge; hp tk & tn ln floral, red & brown/ tan (oglz)
	67	58	footed (serving?) bowl	rc	ww, see vessel 49; molded vessel shape
	84	19	plate	rc	ww, raised letters around rim, only one visible—, . . . U, w/hp border stripes— dk green; set w/vessels 47, 57
	90	3	bowl/covered dish	?	sp, tn ln border stripe around molded heel, gold (oglz), w/etched sprig motif below
Nonpainted nontransfer printed					
Shell edge	5	28	plate	rc	ww, see Plate 6c
	27	5	platter	mc	ww
Floral edge	13	54	plate	rc	i
	18	1	plate	sc	i
	28/29	38	platter	snc	sp, molded vessel shape

SMITH-GOSNEY continued

Class	Vessel number	Number of sherds	Vessel form	Lip form	Remarks
Other edge	35	6	saucer	rc	i
	37	24	bowl	sc	p, bosses & abstract floral over vessel int
	39	1	saucer	rc	i
	14	74	plate	mc	i, molded border; see Plate 7n for backmark
	15	15	plate	rc	i, molded border
	30	3	saucer	rc	i, molded horizontal border panels, molded, vessel shape; see Plate 8j for backmark
	31	11	saucer	sc	ww/i, shell & wave; see Plate 8h for backmark
	32	4	saucer	rc	i, molded broad vertical fluted edge w/scallops; see Plate 6p for backmark
	40a	3	saucer	rc	ww, molded border
	64	7	cup	?	ww, floral
Nonraised design					
Transfer printed					
Black					
Blue					
Flow	25	65	plate	rc	pw?, floral
	83	9	cup/bowl	?	pw, floral
Medium and dark	82	4	saucer	rc	ww, abstract floral
	85	3	cup	rc	ww, scenic & floral
Medium and light	22	7	plate	sc	ww, floral border
	23	4	plate	sc	ww, floral border & scenic
	42	26	saucer	rc	ww/i, abstract border & scenic, set w/vessel 59; see Plate 8p for backmark
	59	9	cup	rc	ww/i, see vessel 42; molded vessel shape
Brown	74	15	saucer/plate	?	ww, abstract floral & scenic
	41	20	saucer	rc	ww, abstract floral border & scenic
	60	23	cup	rc	ww, int abstract floral border, ext scenic
	72	6	bowl	?	ww, scenic; molded vessel shape
	89	1	serving bowl/platter	?	tk ww, floral; molded vessel shape
Cranberry	68	29	sugar bowl	rc	ww, abstract floral around pedestal w/hunting scene on central portion of vessel; molded vessel shape; see Plate 2b
Green	7	67	plate	sc	ww, fruit motif; see Plate 7k for backmark
	8	10	plate	?	ww, scenic
	73	5	cup	?	ww, scenic w/writing, . . . <i>I. . . sp. . . . ich</i> ; see Plate 1i
	88	1	cup	rc	ww, writing, . . . <i>EVE. . .</i> w/hp tn ln border stripe, pink

SMITH-GOSNEY continued

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
Purple	12	54	plate	rc	ww, scenic
Two-tone	26	30	plate	sc	ww, rose motif, blue & red
	95	1	cup	rc	ww, int abstract floral border, red, w/ext writing, . . .EPH, black
Decal					
Other	81	5	decorative plate	?	ww, decal of woman's face w/upswept hairdo, lt blue, yellow, red & brown
Handpainted					
Floral	43	32	saucer	rc	ww, tk & tn ln sprig, pink, blue, black & lt green; set w/vessels 44, 50
	44	14	saucer	rc	ww, see vessel 43
	46	13	saucer	rc	sp, tn ln rose branch, black & green
	48	37	saucer	rc	ww, broadline style, dk green, blue, red & black
	50	23	cup	rc	ww, tk & tn ln sprig, pink, blue, black & lt green
	51	1	cup	?	tk ww, tk ln, flow blue, molded pedestal; see Plate 6f for backmark
	56	6	cup	rc	sp, traces floral design, lt green
	61	2	cup	rc?	i, tk ln; molded vessel shape
	62	1	cup	?	ww, tk & tn ln sprig, red; molded vessel shape
	69a	50	pitcher	snc	sp, tk & tn ln floral, pastel blue, green & cranberry (uglz), yellow (oglz); set w/vessel 69b
	69b	1	saucer	rc	sp, see vessel 69a
	80	4	cup	?	ww, stenciled tn ln, green & brown; molded vessel shape
	86a	1	cup	rc	sp, tk & tn ln, pastel lt green & cranberry (uglz), yellow (oglz); set w/vessel 86b
	86b	2	saucer	?	sp, see vessel 86a
Border lined/banded	47	17	saucer	rc	ww, tk & tn ln border stripes, dk green; set w/vessels 57, 84
	57	8	cup	rc	ww, see vessel 47
	75	8	cylindrical container/cup?	rc	brown paste, tk ln border stripe on yellow slip-glazed ext; slip-glazed creamy white int
Annular/slip banded	71	25	cup/bowl	rc	ww, rouletted feather band, green & brown stripes, mocha design, black on earthen brown; see Plate 4a

SMITH-GOSNEY continued

Class	Vessel number	Number ^a of sherds	Vessel form	Lip form	Remarks
Undecorated	76	12	bowl/container	?	ww, white stripes on bright blue
	77	1	bowl	?	ww, white wavy stripes on dark brown; see Plate 4f
	78	1	bowl	?	ww, tn white stripes on earthen yellow
	79	3	bowl/cup	?	ww, blue & brown stripes w/yellow highlights on white
	No decoration except body molding				
	38	5	bowl	rc	sp
	52	3	cup	sc	p
	9	45	plate	rc	i
	10	15	plate	rc	i; see Plate 8b for back-mark
	11	48	plate	rc	i; see Plate 8g for back-mark
	16	9	plate	rc	i
	17	5	plate	rc	i
	19a	104	shallow bowl	rc	yellow ware
	19b	1	container	rc	yellow ware
	20	7	plate	rc	i
	21	3	plate	?	i
	33	10	saucer	rc	i; see Plate 8d for back-mark
	34	3	saucer	rc	i
	36	42	saucer	rc	ww
	40b	69	saucer	rc	ww
	45	10	saucer	rc	ww
	53	12	cup	rc	i
	55	4	cup	rc	i
	58	1	cup	rc	i
	65	1	cup	?	ww
	66	5	cup	rc	i

^a Does not include miscellaneous sherds of decorated softpaste porcelain (12 rim sherds and 1 body sherd) and undecorated softpaste porcelain (36 rim sherds and 5 body sherds); decorated pearlware (1 body sherd) and undecorated pearlware (10 body sherds and 13 basal sherds); decorated whiteware/ironstone (12 rim sherds and 15 body sherds) and undecorated whiteware/ironstone (177 rim sherds, 455 body sherds, and 133 basal sherds [12 of which are backmarked]); and 1554 small fragments.

References

- Atherton, L. E.
1971 *The frontier merchant in mid-America*. Columbia: University of Missouri Press.
- Barber, E. A.
1904 *Marks of American potters*. Philadelphia: Patterson and White.
- Bembrose, G.
1952 *19th century English pottery and porcelain*. New York: Pitman.
- Bray, R. T.
1971 Archaeology at the Joseph Smith homestead, Nauvoo, Illinois. Manuscript on file, Department of Anthropology, University of Missouri-Columbia.
- Brosch, D. S.
1967 The Custer Road dump site: An exercise in Victorian archaeology. *The Michigan Archaeologist* 12(2):37-119.
- Burke, C. A.
1982 From potter to spoilheap: Temporal ranges and popularity of 19th century ceramics. Manuscript on file, Parks Canada, Ontario Regional Office, Cornwall.
- Chaffers, W.
1952 *The new collector's hand-book of marks and monograms on pottery and porcelain*. London: Reeves.
- Chandler, A. D., Jr.
1965 The organization of manufacturing and transportation. In *Economic change in the Civil War era*, edited by D. T. Gilchrist and W. D. Lewis. Greenville, Delaware: Eleutherian Mills-Hagley Foundation. Pp. 137-65.
- Clark, G., and M. Hugto
1979 *A century of ceramics in the United States 1878-1979*. New York: Dutton.
- Cole, A. K.
1967 *The Golden guide to American antiques*. New York: Golden Press.
- Collard, E.
1967 *Nineteenth-century pottery and porcelain in Canada*. Montreal: McGill University Press.
- Cotter, J. L.
1968 Ceramics. In *Handbook for historical archaeology*, Part I, compiled by J. L. Cotter. Published by the author. Pp. 6-30.
- Coysh, A. W.
1974 *Blue and white transfer ware 1780-1840*. Vancouver: David and Charles.
- Cunningham, J.
1982 *The collector's encyclopedia of American dinnerware*. Paducah: Collector Books.
- Cushion, J. P.
1976 *Pottery and porcelain tablewares*. New York: Morrow.
1980 *Handbook of pottery and porcelain marks*. London: Faber and Faber.
- DeBarthe, P.
1979 The Smith Mansion Hotel latrine and other discoveries of the 1978 archaeological project. Manuscript on file, Department of Anthropology, University of Missouri-Columbia.
- Dunnell, R. C.
1971 *Systematics in prehistory*. New York: Free Press.
- Elliott, C. W.
1978 *Pottery and porcelain*. New York: Appleton.
- Garner, P. (editor)
1978 *The encyclopedia of decorative arts 1890-1940*. New York: Van Nostrand Reinhold.
- Gates, W. C., Jr., and D. E. Ormerod
1982 The East Liverpool pottery district: Identification of manufacturers and marks. *Historical Archaeology* 16:1-358.
- Godden, G. A.
1961 *Victorian porcelain*. London: Jenkins.
1963 *British pottery and porcelain 1780-1850*. London: Baker.
1964 *Encyclopedia of British pottery and porcelain marks*. London: Jenkins.
1965 *An illustrated encyclopedia of British pottery and porcelain*. New York: Bonanza.
1966 *Illustrated encyclopaedia of British pottery and porcelain*. London: Jenkins.
1968 *Handbook of British pottery and porcelain marks*. London: Jenkins.
1972 *Jewitt's ceramic art of Great Britain 1800-1900*. New York: Arco.
- Greaser, A., and P. Greaser
1973 *Homespun ceramics*. Des Moines: Wallace-Homestead.
- Harling, R. (editor)
1973 *Dictionary of design and decoration*. New York: Viking Press.
- Honey, W. B.
1962 *English pottery and porcelain*. London: Black.
- Hudson, J. C.
1969 A location theory for rural settlement. *Annals of the Association of American Geographers* 59:365-81.
- Hughes, B., and T. Hughes
1968a *The collector's encyclopedia of English ceramics*. London: Abbey Library.
1968b *English porcelain and bone china 1743-1850*. New York: Praeger.
- Jacobs, L. H.
1983 Analysis of a nineteenth-century military midden: The Butler's Barracks example. *Parks Canada Research Bulletin* No. 205.
- Ketchum, W. C., Jr.
1970 Early potters and potteries of New York state. New York: Funk and Wagnalls.
1971 *The pottery and porcelain collector's handbook*. New York: Funk and Wagnalls.
1983 *Pottery and porcelain*. New York: Knopf.
- Kovel, R. M., and T. H. Kovel
1953 *Dictionary of marks—pottery and porcelain*. New York: Crown.
1983 *The Kovels' illustrated price guide to depression glass and American dinnerware*. New York: Crown.
- Little, W. L.
1969 *Staffordshire blue: Underglaze blue transfer-printed earthenware*. New York: Crown.

- Lofstrom, E.
 1973 An analysis of temporal change in a 19th century ceramic assemblage from Fort Snelling, Minnesota. Manuscript on file, Minnesota Historical Society, Fort Snelling.
 1976 An analysis of temporal change in a nineteenth century ceramic assemblage from Fort Snelling, Minnesota. *The Minnesota Archaeologist* 36:16-47.
- Lofstrom, E., J. P. Tordoff, and D.C. George
 1982 A seriation of historic earthenwares in the midwest, 1780-1870. *The Minnesota Archaeologist* 41(1):3-29.
- Mankowitz, W., and R. G. Haggart
 1957 *The concise encyclopedia of English pottery and porcelain*. New York: Hawthorne.
- Mason, R. D.
 1982 A regional chronology of the early historical period. In *The Cannon Reservoir Human Ecology Project: An archaeological study of cultural adaptations in the southern Prairie Peninsula*, edited by M. J. O'Brien, R. E. Warren, and D. E. Lewarch. New York: Academic Press. Pp. 131-41.
 1984 Euro-American settlement systems in the central Salt River valley of northeast Missouri. *University of Missouri, American Archaeology Division, Publications in Archaeology* No. 2.
- Mason, R. D., R. E. Warren, and M. J. O'Brien
 1982 Historic settlement patterns. In *The Cannon Reservoir Human Ecology Project: An archaeological study of cultural adaptations in the southern Prairie Peninsula*, edited by M. J. O'Brien, R. E. Warren, and D. E. Lewarch. New York: Academic Press. Pp. 369-88.
- Miller, G. L.
 1973 Some notes on blue edgeware. Paper presented at the sixth annual meeting of the Society for Historical Archaeology.
 1974 Tenant farmer's tableware: Nineteenth-century ceramics from Tabb's Purchase. *Maryland Historical Magazine* 69:197-210.
 1980 Classification and economic scaling of 19th century ceramics. *Historical Archaeology* 14:1-40.
- Miller, G. L., and S. D. Hurry
 1983 Ceramic supply in an economically isolated frontier community: Portage County of the Ohio Western Reserve, 1800-1825. *Historical Archaeology* 17(2):80-92.
- Mitchell, R. D.
 1972 Agricultural regionalization: Origins and diffusion of the upper South before 1860. In *International geography* (Vol. 2), edited by W. P. Adams and F. M. Helleiner. Toronto: University of Toronto Press. Pp. 740-42.
 1978 The formation of early American cultural regions: An interpretation. In *European settlement and development in North America: Essays on geographical change in honour and memory of Andrew Hill Clark*, edited by J. R. Gibson. Toronto: University of Toronto Press. Pp. 66-90.
- Noël Hume, I.
 1969a Pearlware: Forgotten milestone of English ceramic history. *Antiques* 95:390-97.
 1969b Addition and correction. *Antiques* 96:922-23.
 1970 *A guide to artifacts of colonial America*. New York: Knopf.
- O'Brien, M. J.
 1984 *Grassland, forest, and historical settlement: An analysis of dynamics in northeast Missouri*. Lincoln: University of Nebraska Press.
- O'Brien, M. J., and D. R. Henning
 1982 Introduction. In *The Cannon Reservoir Human Ecology Project: An archaeological study of cultural adaptations in the southern Prairie Peninsula*, edited by M. J. O'Brien, R. E. Warren, and D. E. Lewarch. New York: Academic Press. Pp. 3-12.
- O'Brien, M. J., D. E. Lewarch, J. E. Saunders, and C. B. Fraser
 1980 An analysis of historical structures in the Cannon Reservoir area, northeast Missouri. *University of Nebraska, Department of Anthropology, Technical Report* No. 80-17.
- O'Brien, M. J., R. D. Mason, and J. E. Saunders
 1982 The structure of historical communities. In *The Cannon Reservoir Human Ecology Project: An archaeological study of cultural adaptations in the southern Prairie Peninsula*, edited by M. J. O'Brien, R. E. Warren, and D. E. Lewarch. New York: Academic Press. Pp. 301-35.
- Otto, J. S.
 1977 Artifacts and status differences—a comparison of ceramics from planter, overseer, and slave sites on an antebellum plantation. In *Research strategies in historical archeology*, edited by S. South. New York: Academic Press. Pp. 91-118.
- Price, C. R.
 1979 19th century ceramics in the eastern Ozark border region. *Southwest Missouri State University, Center for Archaeological Research, Monograph Series* No. 1.
- Prime, W. C.
 1878 *Pottery and porcelain of all times and nations*. New York: Harper.
- Ramsey, J.
 1947 *American potters and pottery*. New York: Tudor.
- Ray, M.
 1974 *Collectible ceramics: An encyclopedia of pottery and porcelain for the American collector*. New York: Crown.
- Roberts, C. N.
 1964 Developments in the Missouri pottery industry 1800-1950. *Missouri Historical Review* 58:464-73.
- Shaw, S.
 1970 *History of the Staffordshire potteries*. New York: Praeger (originally published in 1829).
- Smith, S. D. (editor)
 1976 An archaeological and historical assessment of the First Hermitage. *Tennessee Department of Conservation, Division of Archaeology, Research Series* No. 2.
- South, S.
 1972 Evolution and horizon as revealed in ceramic analysis in historical archaeology. *The Conference on Historic Site Archaeology Papers* (1971) No. 6:71-106.
 1974 The horizon concept revealed in the application of the mean ceramic data formula to Spanish majolica in the New World. *The Conference on Historic Site Archaeology Papers* (1972) No. 7:96-122.
 1977 *Method and theory in historical archaeology*. New York: Academic Press.

- Steinacher, T. L., and G. F. Carlson
 1978 Nineteenth century Euro-American ceramics in Nebraska. Manuscript on file, Department of Anthropology, University of Nebraska-Lincoln.
- Stone, G. W.
 1970 Ceramics in Suffolk County, Massachusetts, inventories 1680-1775—a preliminary study with diverse comments thereon, and sundry suggestions. *The Conference on Historic Site Archaeology Papers* (1968) No. 3, Part 2.
- Stone, L. M.
 1970 Formal classification and the analysis of historic artifacts. *Historical Archaeology* 4:90-102.
- Taylor, G. R.
 1951 The transportation revolution 1815-1860. New York: Rinehart.
- Teller, B. G.
 1968 Ceramics in Providence 1750-1800. *Antiques* 94: 570-77.
- Thorne, C. J.
 1947 *Handbook of old pottery and porcelain marks*. New York: Tudor.
- U.S. Department of Commerce
 1915 The pottery industry. *United States Department of Commerce, Miscellaneous Series* No. 21.
- Van Rensselaer, S.
 1966 Banded creamware. *Antiques* 90:337-41.
- Warren, R. E.
 1982 The historical setting. In *The Cannon Reservoir Human Ecology Project: An archaeological study of cultural adaptations in the southern Prairie Peninsula*, edited by M. J. O'Brien, R. E. Warren, and D. E. Lewarch. New York: Academic Press. Pp. 29-70.
- Warren, R. E., C. K. McDaniel, and M. J. O'Brien
 1982 Soils and settlement in the southern Prairie Peninsula. *Contract Abstracts and CRM Archeology* 2(3):36-49.
- Warren, R. E., and M. J. O'Brien
 1981 Regional sample stratification: The drainage class technique. *Plains Anthropologist* 26:213-27.
- 1982 Models of adaptation and change. In *The Cannon Reservoir Human Ecology Project: An archaeological study of cultural adaptations in the southern Prairie Peninsula*, edited by M. J. O'Brien, R. E. Warren, and D. E. Lewarch. New York: Academic Press. Pp. 85-100.
- Warren, R. E., M. J. O'Brien, and R. D. Mason
 1981 Settlement dynamics in the southern Prairie Peninsula: A regional model of frontier development. In current directions in midwestern archaeology: Selected papers from the Mankato Conference, edited by S. Aninsson. *Minnesota Archaeological Society, Occasional Publications in Minnesota Anthropology* No. 9, 15-34.
- Waselkov, G.
 1979 Zumwalt's Fort: An archaeological study of frontier process in Missouri. *The Missouri Archaeologist* 40:1-129.
- Waselkov, G., R. T. Bray, and L. Waselkov
 1975 Archaeological investigations of the Hyrum Smith site, 1974. Manuscript on file, Department of Anthropology, University of Missouri-Columbia.
- Winter, M.C.
 1974 Residential patterns at Monte Alban, Oaxaca, Mexico. *Science* 186:981-87.

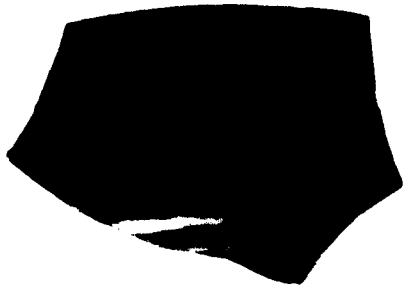


Plates

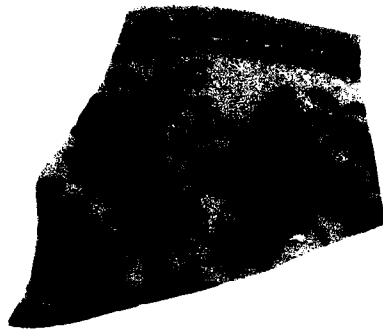


Plate 1

- a. plate rim, transfer print, light, medium, and dark blue oak leaf and acorn motif, interior, whiteware, Harvel Jordan 71a
- b. plate rim, transfer print, medium and dark blue floral motif, interior, whiteware, Mappin-Murphy 24
- c. saucer rim, transfer print, light and medium blue abstract border with floral motif below, interior, whiteware, Samuel Smith 90
- d. saucer base, transfer print, light and medium blue scenic motif, interior (vessel has impressed indeterminate mark and transfer print dark blue star mark on base exterior), whiteware, Mappin-Murphy 59
- e. cup rim, transfer print, black scenic motif, exterior (interior has handpainted border stripes), whiteware, Mappin-Murphy 106
- f. cup body, transfer print, black scenic motif with handpainted yellow bands, exterior, whiteware, Mappin-Vaughn 25
- g. plate/saucer body, transfer print, green scenic motif, interior, whiteware, Samuel Smith 101
- h. saucer/plate rim, transfer print, green abstract border with floral motif below, interior, whiteware, Mappin-Murphy 67
- i. cup body, transfer print, green scenic motif (with indeterminate lettering, not shown), exterior, whiteware, Smith-Gosney 73
- j. plate rim, transfer print, brown abstract floral border with scenic motif below, interior, whiteware, Samuel Smith 88
- k. saucer rim, stenciled, brown floral design with partial handpainted fill-in near lip, interior, whiteware, Harvel Jordan 30
- l. plate rim, raised border design, transfer print, brown abstract floral motif, whiteware, Harvel Jordan 33



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Plate 2

- a. pitcher rim with raised border design, transfer print, cranberry floral motif, exterior (motif also on interior), ironstone, Smith-Gosney 70
- b. pedestaled-bowl body, molded vessel shape, transfer print, cranberry hunting scene motif, exterior (handpainted thin-line border stripe on interior), whiteware, Smith-Gosney 68
- c. plate body, transfer print, cranberry abstract floral motif (from area close to rim), interior, whiteware, Mappin-Murphy 28
- d. plate rim, transfer print, cranberry floral border motif, interior, whiteware, Mappin-Murphy 29
- e. small plate base, transfer print, cranberry kneeling cherub and swan motif, interior (vessel has impressed geometric mark and handpainted 13 pattern or workman's mark on base exterior), whiteware, Mappin-Murphy 26
- f. plate/platter rim, transfer print, purple floral border motif with handpainted green and yellow accent, interior, whiteware, Mappin-Murphy 23
- g. plate body, transfer print, purple oriental scenic motif, interior, whiteware, Mappin-Murphy 153
- h. thick-walled bowl/basin pedestal, transfer print, purple with blue "halo" effect abstract border motif, exterior, ironstone, Mappin-Murphy 145
- i. plate rim, transfer print, black and gray floral border motif (center portion of vessel has scenic motif), interior, whiteware, Samuel Smith 87



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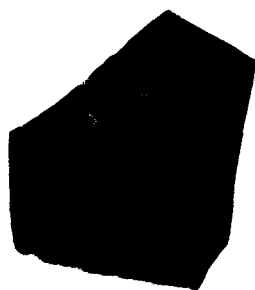
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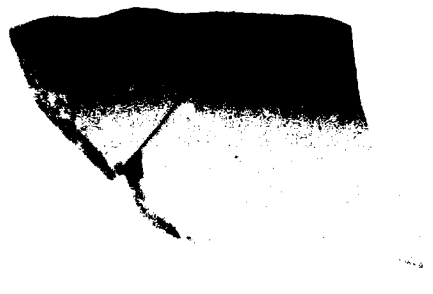
LATE 2

Plate 3

- a. plate rim, green cord and hanging fern/tassel edge, interior, whiteware, Mappin-Murphy 18
- b. plate rim, green shell edge, interior, whiteware, pre-1840 provenience, Mappin-Murphy 173
- c. plate rim, green shell edge, interior, pearlware, pre-1840 provenience, Mappin-Murphy 20
- d. plate rim, green shell edge, interior, whiteware, Samuel Smith 67
- e. plate rim, blue shell edge, interior, whiteware, Mappin-Murphy 11
- f. plate rim, blue plume and dot edge, interior, whiteware, pre-1840 provenience, Mappin-Murphy 4
- g. plate rim, blue cord and herringbone edge, interior, pearlware, Smith-Gosney 3
- h. plate rim, blue shell edge, interior, whiteware, pre-1840 provenience, Mappin-Murphy 13
- i. plate rim, blue cord and hanging fern/tassel edge, interior, whiteware, pre-1840 provenience, Mappin-Murphy 1
- j. saucer rim with raised border design and flow blue border, traces of gold edging around lip, interior, whiteware, Mappin-Murphy 22



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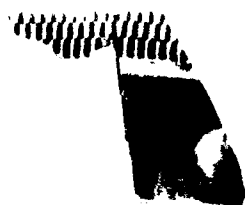
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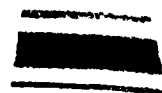
- a. annular-decorated mug/bowl rim with dendritic mocha motif and rouletted feather design, exterior, whiteware, Smith-Gosney 71
- b. annular-decorated bowl rim with rouletted border design and swirled or "finger-painted" motif, exterior (vessel also has black and white dots on exterior), whiteware, pre-1840 provenience, Mappin-Murphy 121
- c. cup rim with handpainted border stripes, interior (exterior has red border stripes only), whiteware, Harvel Jordan 62
- d. annular-decorated cup body with swirled or "finger-painted" motif, exterior, whiteware, Harvel Jordan 66
- e. annular-decorated bowl rim, exterior, whiteware, Samuel Smith 86
- f. annular-decorated bowl rim, exterior, whiteware, Samuel Smith 77
- g. annular-decorated bowl body, exterior, whiteware, Mappin-Murphy 156
- h. shallow bowl/saucer rim with discontinuous, raised handpainted border motif, interior, whiteware (vessel has John Edwards mark [see Plate 8k]), Smith-Gosney 49
- i. annular-decorated bowl body with rouletted raised dot design, whiteware, Mappin-Murphy 124
- j. plate body, handpainted flow blue floral design, interior, whiteware, Samuel Smith 70
- k. annular-decorated bowl body with swirled or "finger-painted" motif, exterior, whiteware, pre-1840 provenience, Mappin-Murphy 123
- l. plate/platter with molded rim, handpainted flow blue border band (underglaze) with red scalloped motif below and gold edging (overglaze), (vessel also has thick and thin overglaze handpainting below rim, not shown), interior, Gaudy Ironstone ("blinking/seeing eye" pattern), ca. 1855-65 (Ray 1974:77), Smith-Gosney 62



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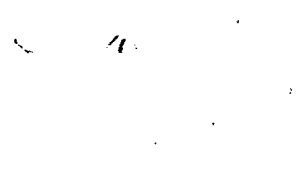
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Plate 5

- a. cup body, red sponge/spatter above heel break (green sponge/spatter below vessel lip, not shown), exterior, whiteware, Samuel Smith 60
- b. cup rim, blue sponge/spatter, exterior (same decoration on rim interior), whiteware, Harvel Jordan 45a
- c. cup rim, handpainted thick- and thin-line "sprig" motif, exterior (handpainted green border stripe on interior), whiteware, Samuel Smith 33
- d. cup rim, handpainted broadline style floral, scallop and band motif, exterior, whiteware, Samuel Smith 29
- e. cup body, handpainted thick- and thin-line "sprig" motif, molded vessel shape, exterior, whiteware, Harvel Jordan 71b
- f. saucer rim, handpainted border stripe with stenciled floral design below, molded diagonally fluted surface, interior, softpaste porcelain, Samuel Smith 48
- g. cup rim, thick- and thin-line overglaze floral motif, molded fluted surface, exterior, softpaste porcelain, Samuel Smith 58
- h. saucer rim, handpainted, variant of broadline-style floral motif (note use of metallic color), interior, softpaste porcelain, Mappin-Murphy 55
- i. plate rim, raised edge design with handpainted gold trim, floral decal/transfer-print outline with handpainted fill-in, interior, whiteware, Samuel Smith 106
- j. plate rim, molded horizontal fluted panels, transfer-printed border in "Art Deco" style with handpainted fill-in, interior, whiteware, Harvel Jordan 13
- k. bowl rim, raised-cord edge design, floral decal, alternating with raised trellis motifs (not shown), interior, whiteware; vessel has stamped *Ivory Color T* Edwin M. Knowles mark (see Plate 7c), Harvel Jordan 2
- l. plate/platter rim, handpainted abstract border design with gold trim and floral decal motif, interior, whiteware, Mappin-Murphy 104



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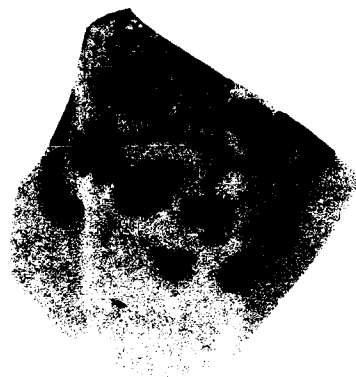
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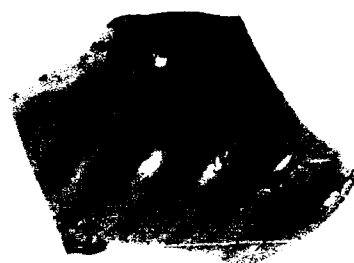
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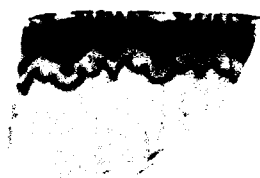
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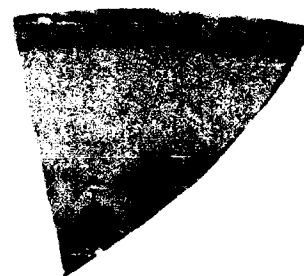
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Plate 6

- a. cup rim, handpainted thick-line floral, dark blue, exterior, whiteware, Mappin-Murphy 90
- b. cup rim, handpainted interior and exterior border stripe with tea-leaf motif, luster brown, exterior, ironstone, Harvel Jordan 1
- c. bowl rim, raised "Art Deco" style border motif, interior, hardpaste porcelain, Harvel Jordan 73
- d. plate rim, raised "Art Deco" style border motif, interior, whiteware, Harvel Jordan 74
- e. plate rim, unpainted shell edge, interior, whiteware, Smith-Gosney 5
- f. handpainted red workman's mark, unidentified, cup with handpainted thick- and thin-line blue floral motif, molded pedestal, Smith-Gosney 51
- g. rust transfer-printed backmark, Doulton and Co., Burslem, 1882-, saucer, Mappin-Vaughn 27a
- h. rust transfer-printed backmark, Doulton and Co., Burslem, 1882-, cup Mappin-Vaughn 27a
- i. black transfer-printed backmark, whiteware, unidentified, plate, ironstone, Smith-Gosney 94f
- j. green transfer-printed backmark, probable Johnson Bros., Hanley and Tunstall, 1883-1913 (Godden 1964:355-56), saucer; whiteware/ironstone, Harvel Jordan 157i
- k. impressed workman's mark or batch mark, unidentified, plate/saucer, pearlware, Mappin-Murphy 162a
- l. black transfer-printed backmark, unidentified, plate/saucer, whiteware, ironstone, Harvel-Jordan 157d
- m. black transfer-printed backmark, unidentified, plate/saucer, ironstone, Smith-Gosney 94d
- n. black transfer-printed backmark, unidentified, plate/saucer, ironstone, Harvel-Jordan 157f
- o. black transfer-printed backmark, unidentified, saucer, ironstone, Mappin-Vaughn 5
- p. combination black transfer-printed and impressed backmark, unidentified British company, saucer, ironstone, Smith-Gosney 32



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Plate 7

- a. dark green stamped backmark, Edwin M. Knowles China Co., East Liverpool, Ohio, 1900-63; this piece dates to 1928 (cf. batch mark) (Gates and Ormerod 1982:99), plate, whiteware, Harvel Jordan 6
- b. dark green stamped backmark, Edwin M. Knowles China Co., East Liverpool, Ohio, 1900-63 (Gates and Ormerod 1982:99), plate, whiteware, Harvel Jordan 157j
- c. dark green stamped backmark, Edwin M. Knowles China Co., East Liverpool, Ohio, 1900-63; this piece dates ca. 1927 (cf. Gates and Ormerod 1982:102), bowl, whiteware, Harvel Jordan 2
- d. dark green stamped backmark, Sevres China Co., East Liverpool, Ohio, established 1900 (Gates and Ormerod 1982:241; Thorne 1947:147), plate, whiteware, Harvel Jordan 157k
- e. black transfer-printed backmark, probably Peoria Pottery Co., Peoria, Ill., 1873-94 (Thorne 1947:142), plate/saucer, ironstone, Mappin-Vaughn 27b
- f. dark green stamped backmark, D. E. McNicol Pottery Co., Clarksburg, W. Va., plant opened 1914 (Gates and Ormerod 1982:185, 189), plate, whiteware, Harvel Jordan 142
- g. dark green handpainted backmark, probably Steubenville Pottery Co., Steubenville, Ohio, ca. 1879-1900 (Ketchum 1971:185; Ramsey 1947:231), saucer/plate, whiteware, Mappin-Murphy 162f
- h. green transfer-printed backmark, unidentified American company, saucer, whiteware, Samuel Smith 4
- i. green transfer-printed or stamped backmark, probably Crown Pottery Co., Evansville, Ind., ca. 1891-1905 (Ketchum 1971:165; Thorne 1947:124), saucer, whiteware, Mappin-Murphy 65
- j. cranberry transfer-printed backmark, unidentified, plate, whiteware, Mappin-Murphy 152
- k. green transfer-printed backmark, unidentified, plate, whiteware, Smith-Gosney 7
- l. black transfer-printed backmark, E. A. and S. R. Filley, St. Louis, Mo. importers 1845-60 (cf. DeBarthe 1979:75), manufacturers T. J. and J. Mayer, Dale Hall, Burslem, 1843-55 (Godden 1964:424; 1972:14-15), plate, ironstone, Samuel Smith 122i
- m. black transfer-printed backmark, E. A. and S. R. Filley, St. Louis, Mo., importer 1845-60 (cf. DeBarthe 1979:75), manufacturers T. J. and J. Mayer, Dale Hall, Burslem, 1843-55 (Godden 1964:424; 1972:14-15), wash pitcher, ironstone, Harvel Jordan 105
- n. black transfer-printed backmark with impressed diamond registration mark, E. A. and S. R. Filley, St. Louis, Mo., importers 1845-60 (cf. DeBarthe 1979:75), diamond registration mark for vessel form dates to September 2, 1851, manufacturers T. J. and J. Mayer, Dale Hall, Burslem, 1843-55 (Godden 1964:424; 1972:14-15), plate, ironstone, Smith-Gosney 14



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W. M. Knowles

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D. E. McNicol
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Plate 8

- a. blue transfer-printed backmark, Alfred Meakin (Ltd.), Royal Albert, Victoria and Highgate potteries, Tunstall, 1873/75- , use of globe motif dates ca. 1875-97 (Godden 1964:425-26; 1972:142), saucer/plate, ironstone, photographed at 2x, Mappin-Vaughn 22
- b. black transfer-printed backmark, Alfred Meakin (Ltd.), Royal Albert, Victoria and Highgate potteries, Tunstall, 1873/75- , mark dates 1891-97 (Godden 1964:425-26; 1972:142, 257), plate, ironstone, Smith-Gosney 10
- c. black transfer-printed backmark, Alfred Meakin (Ltd.), Royal Albert, Victoria and Highgate potteries, Tunstall, 1873/75- , use of "Ltd." in mark indicates post-1897 date (Godden 1964:425-26; 1972:142), saucer, ironstone, Mappin-Vaughn 7
- d. black transfer-printed backmark, Alfred Meakin (Ltd.), Royal Albert, Victoria and Highgate potteries, Tunstall, 1873/75- , use of "England" in mark indicates 1880+ date (Godden 1964:425-26; 1972:257), saucer, ironstone, Smith Gosney 33
- e. combination brown stamped and impressed backmark, possible Alfred Meakin (Ltd.), Royal Albert, Victoria and Highgate potteries, Tunstall, 1873/75- (Godden 1864:425-26; 1972:142), saucer, softpaste porcelain, Samuel Smith 22
- f. black transfer-printed backmark, J. and G. Meakin, Hanley, Cobridge and Burslem, 1852-90, mark dates 1880+ (Godden 1972:75, 257), oval serving bowl, ironstone, Mappin-Murphy 115
- g. black transfer-printed backmark, J. and G. Meakin, Hanley, Cobridge and Burslem, 1852-90, mark dates 1880+ (Godden 1972:75, 257), plate, ironstone, Smith-Gosney 11
- h. green transfer-printed backmark, J. and G. Meakin, Hanley, Cobridge and Burslem, 1852-90, mark dates 1880+ (Godden 1972:75, 257), saucer, whiteware/thin ironstone, Smith-Gosney 31
- i. medium blue transfer-printed backmark, Venables and Baines, Burslem, ca. 1851-53 (Godden 1964:633), diamond registration mark refers to light and medium blue transfer print "Union" pattern on plate interior, (cf. Waselkov *et al.* 1975:76-77), dates to February 2, 1852 (Cushion 1980:175), plate, whiteware, Harvel Jordan 8
- j. black transfer-printed backmark, T. J. and J. Mayer, Dale Hall, Burslem, 1843-55 (Godden 1964:424; 1972:14-15), incomplete diamond registration mark may refer to molded interior vessel design, dates to either December 15, 1849, April 4, 1850 or October 9, 1854 (Cushion 1980:175), saucer, ironstone, Smith-Gosney 30
- k. combination brown transfer-printed and impressed backmark, John Edwards and Co., King Street, Fenton, 1847-1900 (Godden 1964:231), mark dates 1880-1900, shallow bowl/saucer, whiteware, Smith-Gosney 49
- l. black transfer-printed backmark, probably J. W. Pankhurst and Co., Hanley, 1850-82 (Godden 1964:481), plate/saucer, ironstone, Mappin-Vaughn 27c
- m. combination black transfer-printed and impressed backmark, Liddle, Elliot and Son, Dale Hall Pottery, Longport, 1862-71 (Godden 1964:235), plate, ironstone, Smith-Gosney 94g
- n. black stamped backmark, W. S. George, E. Palestine, Ohio, and Canonsburg and Kittanning, Pa., mid-1890s-late 1950s (Cunningham 1982:82), serving bowl, whiteware, Harvel Jordan 4
- o. black stamped backmark, W. S. George, E. Palestine, Ohio, and Canonsburg and Kittanning, Pa., mid-1890s-late 1950s (Cunningham 1982:82), "Derwood" refers to plate shape (Kovel and Kovel 1983:195), whiteware, Samuel Smith 7
- p. light and medium blue transfer-printed backmark, unidentified, saucer, whiteware/ironstone, Smith-Gosney



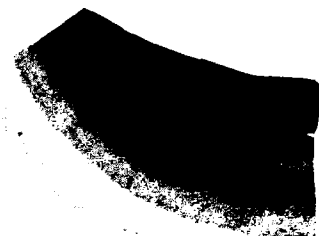
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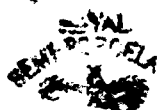
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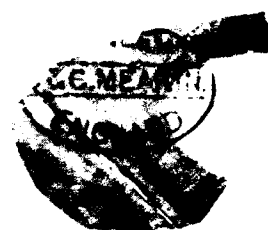
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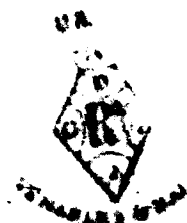
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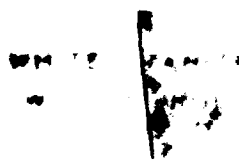
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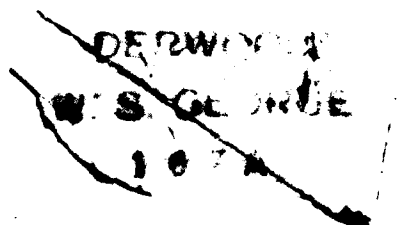
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